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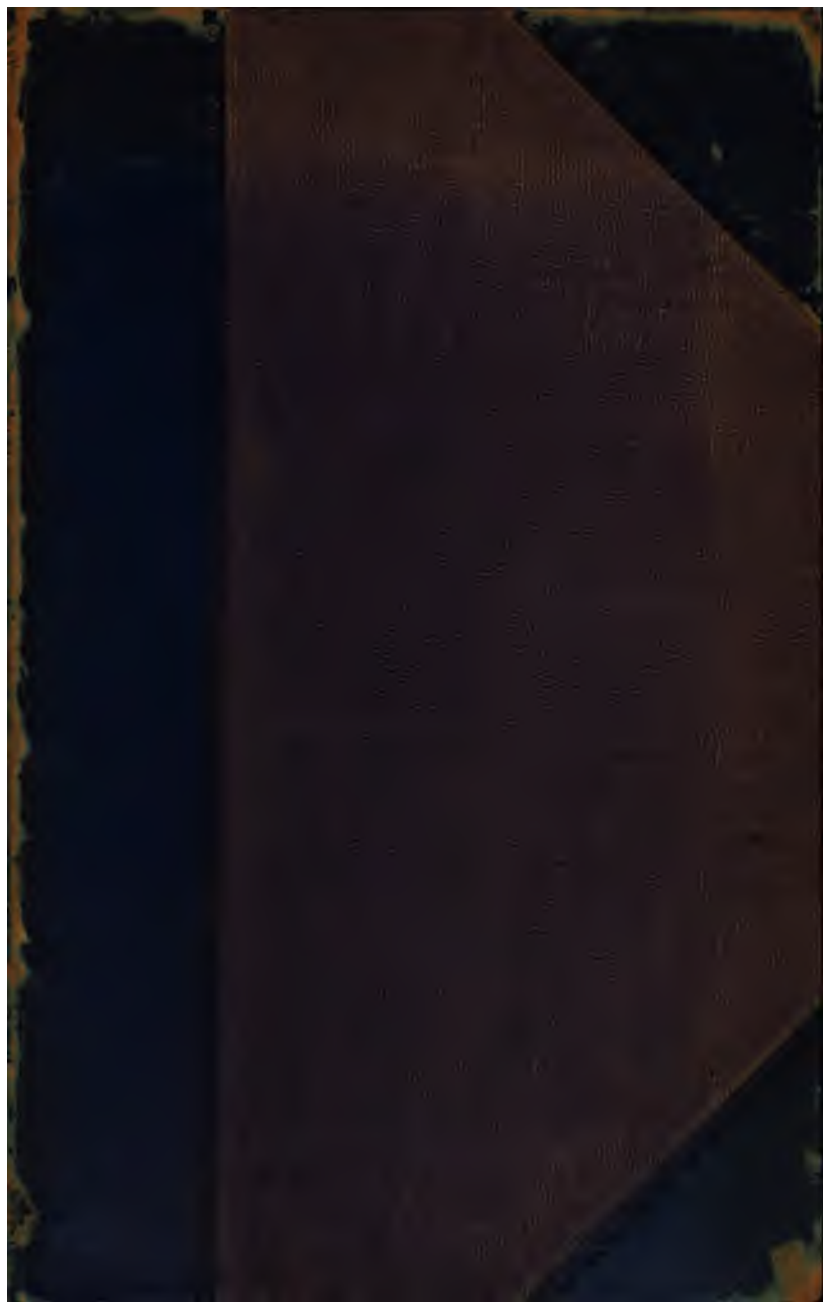
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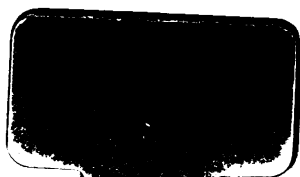
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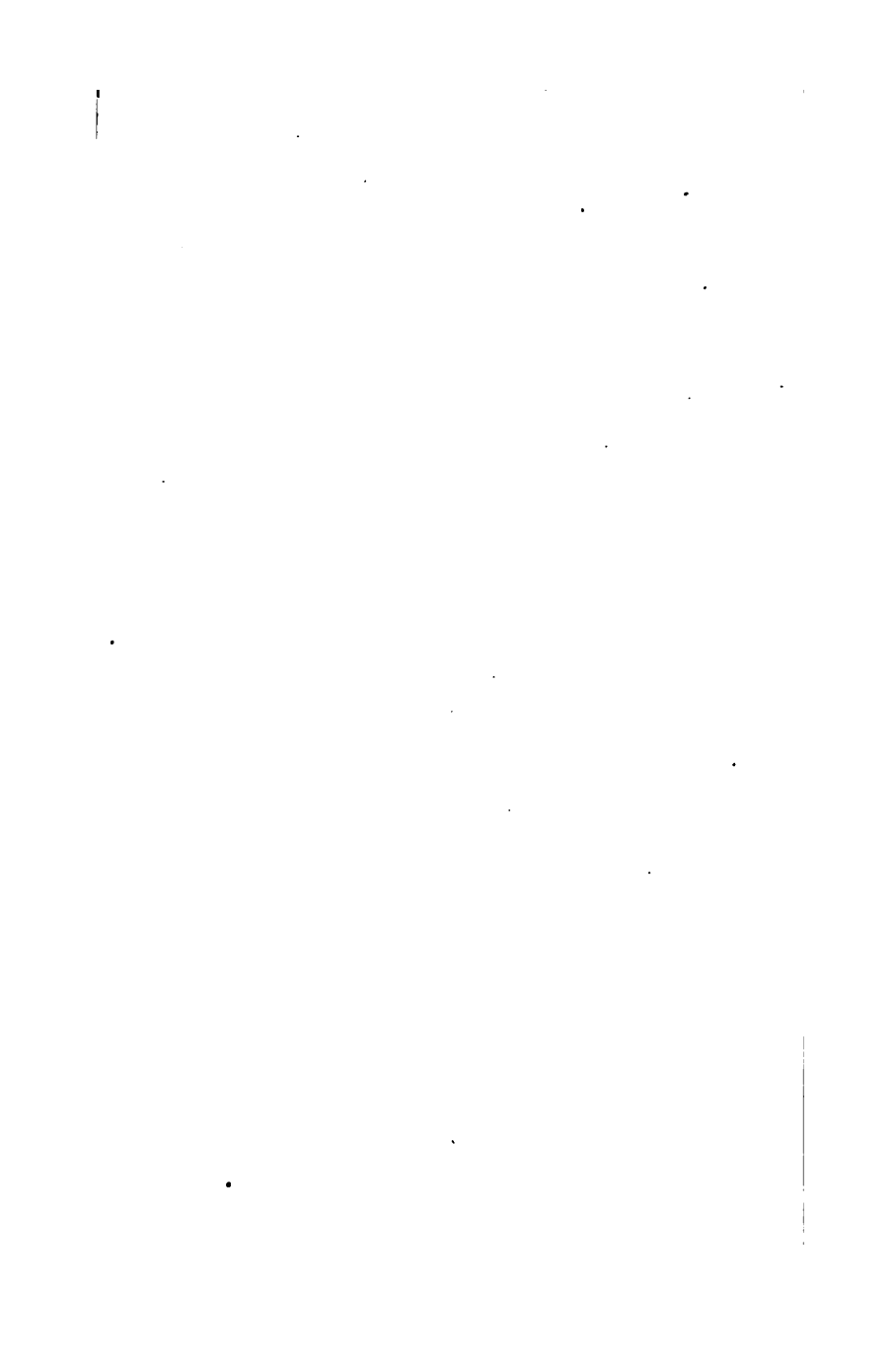


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JOHN LOCKE.

Engraved for the 'pilote of English Literature by Keeman ?

LOCKE'S ESSAY
ON THE
HUMAN UNDERSTANDING.

CONDENSED
UNDER THE SUPERINTENDENCE OF

A. J. VALPY, M. A.

LONDON:
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BIOGRAPHICAL SKETCH

OF

JOHN LOCKE.

JOHN LOCKE was born at Wrington, in Somersetshire, A. D. 1632: his father, Mr. J. Locke, who was descended from the Lockes of Charton Court, in Dorsetshire, possessed a moderate landed property at Pensfold and Bellerton, where he lived.

John Locke was the eldest of two sons, and was educated with great care by his father, of whom he always spoke with the greatest respect and affection. He was sent to Westminster school, whence, in 1651, he went to Christ Church, Oxford, where, in the earliest period of his residence, he was distinguished for his talents and learning. But, notwithstanding this early reputation which he acquired at the University, he often expressed his regret that he had been ever sent there, conceiving that the method of instruction there pursued was ill calculated to open the under-

standing, or prepare the way for any useful knowledge.

The earliest of Locke's printed works is the 'Essay on the Human Understanding.' The original copy in his own hand-writing, dated 1671, is still preserved. Prior to this, however, he had written a work of a political nature, which was never printed, though evidently intended for publication. It was written towards the end of 1660. One of the first and most necessary measures after the Restoration, and one of the most difficult, was the settlement of the church. The king had promised, that endeavors should be used to effect a comprehension; and the tract which Locke wrote was intended to reconcile the low church party to an obedience to the civil magistrate in all indifferent things in public worship, not otherwise commanded by the word of God. It is an answer to a writer who denied the right of the civil magistrate to interfere in matters of religion; and in manner and style it resembles his later controversy with Sir Robert Filmer. The circumstances of the times, however, and the altered policy of the government towards the Presbyterian party, prevented the publication of the tract.

Locke's inclination led him strongly to the study of medicine, which seems to have occupied his thoughts to the end of his life. In the dedication prefixed to Dr. Sydenham's 'Observations on the History and Cure of Acute Diseases,' 1676, he boasts of the approbation bestowed on his method by Mr. J. Locke, who, to borrow Sydenham's own words, 'had exa-

mined it to the bottom ; and who, if we consider his genius and penetration, and exact judgment, had scarce any superior, and few equals now living.'

In 1665 Locke accompanied Sir Walter Vane, the king's envoy to the elector of Brandenburg, during the first Dutch war, as secretary. In the same year, he returned to England, and an offer was made him, which he declined, of going in some public capacity into Spain.

In 1666, a friend in Dublin undertook to procure for him considerable preferment in the church, from the Duke of Ormond, then Lord Lieutenant of Ireland. This also he declined. Thus there occurred, in the course of Locke's life, the choice of three distinct roads to fortune, and perhaps to celebrity ; viz. the temptation of considerable preferment in the church, the practice of physic, and the opportunity of engaging in diplomatic employments.

It appears from Boyle's 'General History of the Air,' that in the same year Locke was engaged in experimental philosophy ; as he began a register of the state of the air in the month of June of that year, and continued it, with many interruptions, till his final departure from Oxford in 1683.

In 1666 also, Locke became acquainted with the celebrated Lord Ashley, better known as Lord Shaftesbury, who, at that time suffering under an abscess in his breast, the consequence of a fall from his horse, came to Oxford in order to drink the water of Astrop. He had written to Dr. Thomas to procure the waters for him on his arrival at Oxford ; but this physician,

happening to be called away from that place, desired Locke to execute the commission. By some accident the waters were not ready when Lord Ashley arrived; and Locke waited on him to apologise for the disappointment, occasioned by the fault of the messenger sent to procure them. Lord Ashley received him with great civility, and was not only satisfied with his excuse, but was so much pleased with his conversation, that he desired to improve an acquaintance thus begun by accident, which afterwards grew into a friendship that continued unchanged to the end of his life.

From Oxford, Locke accompanied Lord Ashley to Sunning-hill Wells, and afterwards resided for some time, towards the end of the year, at Exeter House in the Strand. During his residence with Lord Ashley in London, he had the opportunity of seeing and conversing with many of the most distinguished characters of those times, the Duke of Buckingham, Lord Halifax, &c. He resided partly at Exeter House, and partly at Oxford, at which last place, in 1670, his great work, 'the Essay on the Human Understanding,' was sketched out. It arose, as the author says, from the meeting of five or six friends at his chambers; who, finding difficulties in the inquiry and discussion they were engaged in, he was induced to examine what objects our understandings were, or were not, fitted to deal with. The hasty thoughts which he set down against the next meeting, gave the first entrance to that discourse, which, after long intervals and many interruptions, was brought at last into the order

it assumed, when given to the world eighteen years afterwards.

In 1672, Lord Ashley, after filling the office of chancellor of the exchequer, was created Earl of Shaftesbury, and declared lord chancellor. He then appointed Locke his secretary for the presentation of benefices, and also to some office in the council of trade; both of which he quitted in 1673, when Shaftesbury quarrelled with the court, and placed himself at the head of the country party in parliament.

In 1675 Locke went to reside in France for the benefit of his health, where he remained till the beginning of May, 1679, when he returned to London, and took up his abode at Thanet House in Aldersgate-street, Shaftesbury being then at the head of the English administration.

The asthmatic complaint, however, which had induced Locke to leave England in 1675, was an obstacle to any long-continued residence in London, and obliged him to pass the winter season, for the most part, either at Oxford or in the west.

In 1684, Locke was, by an illegal order of the king, deprived of his studentship at Oxford, on account of a suspicion that he was the author of a pamphlet that gave offence to the government. He now retired to Holland, where the persecution of the government still followed him; the king's minister demanding, among several others, that Locke should be delivered up: he was therefore under the necessity of living very much concealed; and he had actually at one time removed from Amsterdam to Utrecht, to avoid the sus-

picion of being connected with Monmouth, or abetting his expedition. It was during this seclusion that his Letter on Toleration was finished, in 1685: it was first printed in Latin, and afterwards translated into English, and printed in London after the Revolution. William Penn, who enjoyed the favor of James II. offered to obtain from the king a pardon for Locke, who nobly refused to accept it, being conscious of having committed no crime. The same offer was also made by the Earl of Pembroke.

During his abode in Holland he was occupied in various scientific pursuits. He formed a small society which met weekly at each other's houses, to discuss such questions as had been proposed at a previous meeting. The society consisted of Limborch, Le Clerc, Guenelon, and a few others.

The Revolution of 1688 enabled Locke to return to his native country, and he arrived in the same fleet that brought the Princess of Orange to England. It was almost immediately after his arrival that an offer was made him to be employed as envoy at one of the great German courts; an appointment which he modestly refused. He now endeavored to be reinstated in his studentship at Christ Church, for which purpose he presented a petition to the king as visitor; but finding that he could only be received as a supernumerary, he determined to press his claim no farther.

The Essay on the Human Understanding, which had been finished during the author's retirement in Holland, and the English version of the Letter on

Toleration, were now published on his return to his native country. The Essay, soon after its publication, excited considerable attention. Lord Shaftesbury was one of the first who sounded the alarm against what he conceived to be the drift of that philosophy, which denies the existence of innate principles.

About four years after the publication of the Essay, that is, towards the end of the year 1694, the new philosophy began to excite some attention at Oxford. Mr. Wynne, fellow of Jesus College, was the first who recommended the Essay in that University. With the approbation of the author, whom he consulted on the subject, this gentleman published an abridgment of the work.

After the first objections had been overcome, the success of the Essay must be considered to have been very great, as its several successive editions during the life of the author, as well as an excellent translation by M. Coste into the French language, sufficiently attest. If, however, the Essay received the approbation of enlightened men, not only in England, but on the continent; yet, after an interval of several years from its first publication, when time had been allowed to sift its merits and decide its character, it excited the disapprobation of the heads of houses at Oxford, who at one time took counsel to banish it from that seat of learning.

It may be here necessary to give some account of the attack which Dr. Stillingfleet made on the Essay,

as also on the principles of the author. Toland had published a book called 'Christianity not Myste-rious,' in which he endeavored to prove that there is nothing in the Christian religion contrary to reason, or even above it; and in explaining his doctrines, had used several arguments from the Essay on the Human Understanding. It happened also that some Unitarian treatises, published nearly at the same time, maintained that there was nothing in the Christian religion but what was rational and intelligible; and Locke, having asserted in his writings, that revelation delivers nothing contrary to reason; the bishop of Worcester, defending the mysteries of the Trinity against Toland and the Unitarians, denounced some of Locke's principles as heretical, and classed his works with those of the above writers. Locke answered the bishop, who replied the same year. This reply was confuted by a second letter of Locke, which produced a second answer from the bishop in 1698. Locke again replied in a third letter, wherein he treated more largely of the certainty of reason by ideas, of the certainty of faith, of the resurrection of the same body, and the immateriality of the soul. He showed the perfect agreement of his principles with the Christian religion, and that he had advanced nothing which had the least tendency to scepticism, with which the bishop had very ignorantly charged him. The death of Stillingfleet put an end to the controversy.

Locke's literary employments at this period were

the Treatises on Government, written in defence of the Revolution against the Tories: and in the year 1690, he published a Second Letter on Toleration.

In 1691 he published the first of his treatises on the subject of the coin, and 'the Farther Consideration on raising the Value of Money,' in 1695, for the purpose of correcting the false ideas then universally prevalent. In the latter work, addressed to Sir John Somers, he endeavors to strip the question of hard, obscure, and 'doubtful words, wherewith men are often misled and mislead others.' He condemns the nefarious project of raising the denomination and altering the standard, as a fraud on all creditors, and justly considers it as 'the means of confounding the property of the subject, and disturbing affairs to no purpose.' The advice of Locke was followed, and the great recoinage of 1695 restored the current money of the country to the full legal standard. In the same year he was appointed to a seat at the council of trade, which, after a short time, his increasing infirmities made him wish to resign.

In the following year King William ordered Locke to attend him at Kensington, desirous to employ him again in the public service; but the state of his health prevented him from accepting the honor that was designed him. Having refused the employment which the king had intended for him, he now determined to resign that which he for some years held, and for the same reason.

The asthmatic complaint, to which he had been long subject, making a continued residence in London, par-

ticularly during the winter season, very distressing to him, he had for some years taken up his abode with Sir F. and Lady Masham, at Oates, near Ongar, in Essex, where he was perfectly at home, and enjoyed the society most agreeable to him; as Lady Masham, the daughter of Cudworth, is said to have been a woman of great sense and of most engaging manners.

During the last four years of his life, increasing infirmities confined him to the retirement he had chosen at Oates; and although laboring under an incurable disorder, he was cheerful to the last, constantly interested in the welfare of his friends, and at the same time perfectly resigned to his own fate. His literary occupation at that time was the study of and commentary on St. Paul's Epistles, published amongst his posthumous works.

In October, 1704, his disorder greatly increased: on the 27th of that month, Lady Masham, not finding him in his study as usual, went to his bedside, when he told her that the fatigue of getting up the day before had been too much for his strength, and that he never expected to rise again from his bed. He said that he had now finished his career in this world, and that in all probability he should not outlive the night, certainly not be able to survive beyond the next day or two. After taking some refreshment, he said to those present, that he wished them all happiness after he was gone. To Lady Masham, who remained with him, he said that he thanked God he had passed a happy life, but that now he found that all was vanity; and exhorted her to consider this world only as a

preparation for a better state hereafter. He would not suffer her to sit up with him, saying that perhaps he might be able to sleep; but if any change should happen, he would send for her. Having no sleep in the night, he was taken out of bed and carried into his study, where he slept for some time in his chair: after waking, he desired to be dressed, and then heard Lady Masham read the Psalms, apparently with great attention; until perceiving his end to draw near, he stopped her, and expired a very few minutes afterwards, about three o'clock in the afternoon of the 28th. of October, in his 73d year.

The character of Locke stands eminently high morally and intellectually. He had the manners of a gentleman, the morals of a Christian, the profundity of a philosopher, and the practical activity of the man of business. He was master of whatever he studied, but no one assumed less the airs of superiority. He was a faithful servant of truth, which he followed with conscientious integrity wherever it led him. He sought for knowledge wherever it was to be found, and yielded to reason wherever it appeared. His conversation was agreeable to all; and though he could excel in raillery, he managed his humor so well as never to wound the feelings of any one. He was charitable to the poor, and sought opportunities of doing good to deserving objects. If he had any defect, it was the being somewhat passionate; but he had got the better of it by reason, and it was seldom that it did him or any one else any harm. He was an exact observer of his word, and what he promised

was sacred. His greatest amusement was to talk with sensible people; and he possessed all the requisite qualities for keeping up an agreeable and friendly intercourse. His literary industry was very great, as the enumeration of his works will show. His great work on Human Understanding was first published in 1690, nearly at the same time as Newton's *Principia*; both contributing to render illustrious the era of the Revolution. The *Treatise on Civil Government*, a *Letter on Toleration*, first published in Latin, in Holland, and afterwards in English, with the second *Letter in Defence of Toleration*, were all published in 1690, and a third *Letter* in 1692; the *Treatise on Education*, 1690; that concerning raising the value of money and lowering the interest, 1691; and *Farther Considerations on the same subject*, 1695, when he was very much consulted on the measures then in operation for restoring the coin; *The Reasonableness of Christianity*, 1695; and a first and second *Vindication of the same*, 1696; and also three elaborate letters in defence of the principles contained in the *Essay against the attacks of the bishop of Worcester*.

The Conduct of the Understanding, one of the most useful and practical of his works, and the *Commentaries and Notes on the Epistles of St. Paul*, close the catalogue of those of his literary labors which have been given to the world.

ESSAY

ON THE

HUMAN UNDERSTANDING.

BOOK I.

CHAPTER I.

Introduction.

SINCE it is the understanding that sets man above the rest of sensible beings, it is worth some labor to make it a subject of inquiry. But though like the eye, it enables us to see other objects, it requires to be set at a distance to be seen itself; and though the inquiry be attended with many difficulties, it cannot fail to be both pleasant and profitable from the assistance it will afford us in our researches on more points than one.

As my purpose is to inquire into the origin, certainty, and extent of human knowledge, together with the grounds and degrees of belief, opinion, and assent, I shall not trouble myself to ascertain in what the essence of the mind consists, or by what motions of our spirits or changes in our bodies we experience sensations or gain ideas, or whether those ideas depend on matter; it will be sufficient to consider what are the discerning faculties of man, and how they are employed; nor shall I consider my time misspent, if it enable us to set down any measures of the certainty

Locke.

A

of our knowlege, or the grounds of those opinions on points, where, judging from the conflict of sentiments, truth has not been, nor is likely to be attained.

To discriminate between opinion and knowlege, and to regulate assent on points of an uncertain nature, it is necessary,

1. To inquire into the origin of our ideas.
2. To show what knowlege we possess by means of those ideas.
3. To consider the grounds and degrees of opinion or faith in matters, of which we have no certain knowlege.

If by such inquiries we can find out the powers of the understanding, the extent to which they reach, and the points where they fail, we shall learn to be cautious in meddling with things beyond our comprehension; and resting content with ignorance, where knowlege is out of our reach, avoid perplexing ourselves with questions about things, of which all are and must be equally ignorant.

But though the understanding be unable to embrace all things, yet we have reason to be thankful, that whatever is essential to our well-being, and conducive to the purposes of a virtuous life here and a happy one hereafter, lies within the reach of the mind. Nor shall we have cause to lament the confined limits of our understanding, if we use it aright in those matters where it may be serviceable; while, on the other hand, we shall be guilty of childish peevishness, if we neglect that which is within the grasp of the mind, merely because there are other things beyond it; and if, instead of employing our mental faculties on objects suited to their power, and of being content with probability where certainty is not attainable, we will disbelieve every thing because we cannot know with certainty all things, we shall act as wisely as he did who would not use his legs, because he had no wings with which to fly.

As soon as we know the powers of our mind, we know what to expect from them, and we shall neither sit still in despair of knowing any thing, nor disclaim what we really do know because there still exist some things not understood. It is well for the sailor to know the length of his line; and though he cannot fathom with it the depths of the ocean, he knows it is long enough to reach the bottom in places, where alone exists any danger of running on shoals. When we can learn all that is needful for the guidance of our opinion and conduct, we need not be troubled if other things escape our knowledge.

This examination of the powers of the mind is the more necessary, as it prevents our thoughts from losing themselves in the vast ocean of being; as if in that boundless extent, there was nothing above, below, or beyond its reach; and as if our thoughts, wandering into depths where they can find no sure footing, and floundering in questions that admit of no resolution, must eventually find their only refuge in confirmed scepticism. But if the horizon, which bounds the enlightened and dark part of things, be once discovered, the mind will either rest quietly in ignorance, undisturbed by what it knows to be unattainable; or be more free to direct itself to inquiries advantageous and satisfactory.

I would premise that the word 'idea,' which frequently occurs in the following treatise, is used to express whatever is the object of the understanding when a man thinks, and includes whatever is meant by 'phantasm,' 'notion,' 'species,' or whatever the mind can be employed about in thinking. Taking for granted that such ideas¹ are in men's minds, our first inquiry shall be, how they come there.

¹ The above use of the word 'idea' was censured by the bishop of Worcester, who says, 'The world hath been strangely amused with 'ideas' of late; and we have been told that strange things might be done by the help of 'ideas'; and yet these ideas

CHAPTER II.

No innate Principles in the Mind.

It is the opinion of some that there are certain innate principles, which every man brings with him into the world. It would be a sufficient refutation of this

at last come to be only common notions of things, which we must make use of in our reasoning. You (i. e. the author of the Essay) say in that chapter about the existence of God, you thought it most proper to express yourself in the most usual and familiar way, by common words and expressions. I would you had done so quite through your book; for then you had never given that occasion to the enemies of our faith to take up your new way of ideas, as an effectual battery (as they imagined) against the mysteries of the Christian faith. But you might have enjoyed the satisfaction of your ideas long enough before I had taken notice of them, unless I had found them employed about doing mischief.'

To which our author replies, 'Your lordship fears that the term 'ideas' may be dangerous, because it has been made use of in arguing against what your lordship defends; for you cannot be fearful of the things signified by the term, inasmuch as they are but the objects of our minds in thinking; and to expect that any one should reason against your lordship without the use of ideas, is to expect that he should reason without thinking.

'But whether it be the name or the thing, from which your lordship apprehends danger, it seems an extraordinary mode of reasoning to write against a book, in which the term 'idea' is not used to a bad purpose, only because it is used against your lordship by others: for I do not see how your lordship's writing against my notions of ideas can hinder your opponents from doing mischief with them.

'Your lordship may be tired of the sound of the word, but you must have a better opinion of the articles of our faith than to think that they can be overturned by a breath formed into any sound whatever. Names are arbitrary, and no one term is more opposed to truth than another;—propositions may be made against truth, and no word is exempt from being used in such propositions; the fault is not in the word, but in those who improperly use it. And when, on my saying that I scarcely use the word 'idea' in my chapter on the Existence of God, your lordship wishes that I had done so through my book, I must consider that your lordship compliments me in wishing my book to be suited to vulgar apprehension; not that you see any harm in the use of the word instead of 'notion,' with which you say it agrees in signification; for this would be to make your lordship write only against an impropriety of speech. I acknowledge your lordship's con-

supposition, to show that men, by their natural faculties, may attain to all the knowledge they have without the help of any such original principles: for as it

descension in spending so much valuable time on the subject, and would, to please your lordship, substitute some other term, could I find one equally appropriate. But I do not see how the word 'idea' is better or worse, because it has been made use of for bad purposes, for the same may be said of the words 'Scripture,' 'reason,' 'distinct,' 'clear,' &c. Nay, the very name of God himself will not escape; for all have been made use of to bad purposes. Should I, indeed, leave the word out of the book altogether, and every where substitute the word 'notions,' might not that word also be used for the purposes of mischief? This I am sure of, that the truths of Christianity cannot be beaten down or endangered by any sound whatever.—'My new way of ideas,' or 'my way by ideas,' is an expression of frequent occurrence in your lordship's letter, and may comprehend my whole essay; for as it treats of the understanding, which is the faculty of thinking, it must of necessity treat of ideas, which are the objects of the mind in thinking; and if it be new, it is but a new history of an old thing; for men have always performed the actions of thinking, reasoning, &c. as they do now, though whether the same account has been given of the process I know not.

'Were I as well read as your lordship, I should have been safe from your reprimand for thinking my way of ideas new for want of looking into other men's thoughts, which appear in their books. I agree with your lordship, that many things may seem new to one that converses only with his own thoughts, which really are not so: but if in spinning them out of his own thoughts they seem new to him, he is the inventor, though another may have thought the same before him; for invention consists not in thinking first, but in not borrowing the thoughts from others. The Chinese had the art of printing before it was known in Europe, but it was subsequently invented in Europe, and not borrowed from the Chinese. How little I affect the honor of originality may be seen in the following words, noticed by your lordship, when, speaking of certainty, I say, 'I think I have shown in what it is that certainty consists, which, whatever it was to others, was, I confess, to me, heretofore, one of those desiderata which I found great want of.' I spoke of it as new only to myself; and yet if I had assumed to myself the honor of an original, I should have your lordship for a guarantee in that point, who are pleased to write against it as something new.

'Truly my book has had most unlucky stars,—to displease your lordship for its novelty, and to subject me to censure for having said what others have said before. As to the way your lordship thinks I should have taken to prevent the having it thought my own invention, when it was common to me with

would be impertinent to suppose the idea of colors innate in a creature who has senses to discern them, so would it be unreasonable to attribute to the impressions of nature those truths which our faculties are fitted to attain. But because censure follows the search of truth when it leads out of the common road, I shall set down, for my excuse, the reasons that made me doubt the truth of that opinion.

It is commonly taken for granted, that there are certain principles in which all mankind agree, and therefore that these principles are innate. But the universal agreement of mankind in any principles would not prove them to be innate, if any other way could be shown by which men may come to that agreement. The argument, however, is against the doctrine of innate principles, for there are none to which men give a universal assent. To begin with speculative principles; the maxims, 'Whatever is, is,' and 'It is impossible for the same thing to be and not to be,' have the reputation of being universally received; yet so far are they from having universal assent, that there are many to whom they are un-

others, it so happened that I could not look into the thoughts of other men, as your lordship recommends; for their language in books is but the result, and not the progress, of their minds. I could look into nobody's understanding but my own to see how it wrought. My book is a copy of my own mind, and I publish it because I think that the intellectual faculties operate alike in most men; but if some have different ways of thinking, reasoning, or arriving at certainty, I would humbly request that they would show us the way of their nobler flights, and their shorter or surer way to certainty, than by observing the agreement or disagreement of ideas.

'Your lordship adds, 'But now it seems nothing is intelligible but what suits with the new way of ideas.' The new way of ideas and the old way of speaking intelligibly are the same, and they consist, 1. in using no words but what are the signs of some determinate object of the mind in thinking; 2. in using the same word steadily for the same object; 3. in joining these words grammatically; and, 4. in uniting sentences in a coherent discourse. Thus only can a man preserve himself from the suspicion of jargon, whether he pleases to call these objects of his mind, which his words do or should stand for, 'ideas' or no.'

known. It is evident that children and idiots have no apprehension or thought of them; and it seems a contradiction to say that truths are imprinted on the soul which it perceives or understands not; for imprinting, if it means any thing, is making certain truths to be perceived. If children and idiots have minds with those impressions on them, they must perceive them; but it is evident that they do not; therefore there are none such. If it be said that a notion may be imprinted on the mind, which it was never yet conscious of, it may be also said that every proposition that the mind is capable of assenting to, is imprinted and innate, and that many truths are imprinted which the mind never did and never shall know, for a man may die in ignorance of much that he was capable of knowing. So that if a capacity of knowing be the natural impression contended for, all that a man ever comes to know will be considered innate; and this, though an improper way of speaking, asserts nothing which any one denies. If truths can be imprinted on the understanding without being perceived, there can be no difference in the original of any truths, for all must be innate or adventitious. To be in the understanding, is to be understood; so that to assert that any thing is in the understanding, and not understood, is to say that any thing is and is not in the understanding. If therefore the two propositions, 'Whatever is, is,' and 'It is impossible for the same thing to be and not to be,' are innate, children cannot be ignorant of them.

To avoid this, it is answered that men assent to them when they come to the use of reason, which signifies, either that as soon as men come to the use of reason these inscriptions come to be known, or that reason assists in the discovery of them. If it be meant that by the use of reason men discover them, and that this proves them to be innate, then it follows that whatever truths reason can discover to us are in-

nate, and, of consequence, all the maxims of the mathematicians, and theorems deduced from them, must be innate, being all discoveries made by reason.

But how can reason be necessary to discover innate principles, when reason itself is but the faculty of deducing unknown truths from known principles? We may as well think the use of reason necessary to make our eyes discover visible objects, as that there should be need of reason, or its exercise, to make our understanding see what is originally imprinted in it. So that to make reason discover those truths is to make it discover what a man knew before; and if men have those impressed truths originally, but are ignorant of them till they come to the use of reason, it is to say that men know them and know them not at the same time.

It will perhaps be said that mathematical truths are not assented to as soon as they are proposed, but have need of reasonings and proofs to gain our assent; while the other, or innate truths, are assented to as soon as they are understood. But this reply contradicts the assertion that the use of reason is necessary to discover them; and they who thus answer will not affirm that a knowlege of the maxim, 'that it is impossible for the same thing to be and not to be,' is a deduction of reason. For reason is search, and requires pains and application; and how can it be supposed that what was imprinted by nature as the guide of reason should need the use of reason to discover it?

Those who will attend to the operations of the understanding will find that a ready assent to some truths depends not on native inscription or the use of reason, but on a distinct faculty of the mind. If, therefore, by saying that men assent to these when they come to the use of reason, be meant that the use of reason assists us in the knowlege of them, it is false; and if true, would not prove them to be innate.

If by 'assenting to them when we come to the use of reason,' be meant that then they are first noticed, and that children assent to them as soon as they come to the use of reason, this is also false; for children have the use of reason long before they know any thing of the maxim, 'that it is impossible for the same thing to be and not to be;' and many persons pass many years, even of their rational age, without ever thinking of it. I allow a necessity, that men should come to the use of reason before they get a knowledge of these general truths, but deny that coming to the use of reason is the time of their discovery. So that the saying, 'that men assent to these maxims when they come to the use of reason,' amounts to no more than this; that they are not known before the use of reason, and may be assented to after; and so may all other truths as well as these, which are not thus distinguishable from others.

But were it true that the time of their being known were when men come to the use of reason, that would not prove them to be innate. For how can it appear that any notion is imprinted on the mind in its first constitution, because it is first assented to when a faculty of the mind, which has quite a distinct province, begins to exert itself? It would be as good proof that they were innate, to say that men assent to them when they come to the use of speech. All that can be meant by the proposition, 'that men assent to them when they come to reason,' is, that, forming general ideas, and understanding general names, being a concomitant of the rational faculty and growing up with it, children do not acquire these ideas, or learn names of them, till, having exercised their minds with particular ideas, they become capable of rational conversation.

The senses at first let in particular ideas, and furnish the yet empty cabinet; and as the mind grows fami-

liar with them, they are lodged in the memory, and names got to them: afterwards the mind abstracts them, and learns the use of general names. Thus the mind is furnished with materials, and the use of reason becomes more visible as these materials increase: but though general ideas and the use of reason grow together, this does not prove them innate. Knowledge is early in the mind, but it is about acquired, and not innate ideas; it being about those things which make the most frequent impressions on the senses. In ideas thus got the mind discovers agreement or disagreement as soon as it has the use of memory, at least long before the use of speech or reason; for a child, before it can speak, knows as well the difference between sweet and bitter, as afterwards it knows that worm-wood and sugar-plums are not the same thing.

A child knows not that 3 and 4 are equal to 7 till he is able to count 7, and has got the idea and name of equality; and he then assents to the truth of the proposition, not because it is innate, nor was his assent delayed till then because he wanted the use of reason; but he gives his assent as soon as he understands the terms; and he knows the truth of the proposition on the same ground as he before knew that a rod and a cherry are not the same, and as he may afterwards know that it is impossible for the same thing to be and not to be. So that the later it is before one comes to have general ideas, or to know the meaning of general terms, the later will be the assent to general maxims; and therefore a man knows that 18 and 19 are equal to 37 by the same evidence as he knows 1 and 2 to be equal to 3; yet a child knows it not so soon, not for the want of the use of reason, but because the ideas those words stand for are not so soon got as those of 1, 2, and 3.

The evasion, therefore, of general assent, when men come to the use of reason, failing to prove those truths

innate, it has been said, that their being assented to as soon as proposed and understood, is sufficient to prove them innate.

If a ready assent to a proposition, on first hearing and understanding it, be a certain mark of an innate principle, men will find themselves plentifully stored with innate principles. They must admit many propositions about numbers to be innate; natural philosophy also, and all the other sciences, afford propositions, which are sure to meet with assent as soon as proposed. 'That two bodies cannot be in the same place,' is as readily assented to as 'that black is not white.' If assent at first hearing and understanding the terms be a mark of innate, then there will be as many innate notions as men can make propositions wherein one idea is denied of another; but as no proposition can be innate, unless the ideas about which it is are innate, this will suppose all our ideas of colors, sounds, tastes, figure, &c. to be innate, than which there cannot be any thing more opposite to reason and experience. Universal assent may be a mark of self-evidence, which depends not on innate impressions, and belongs to many propositions which no one ever thought to be innate.

Nor let it be said that the more particular self-evident propositions, as 'that 1 and 2 are equal to 3,' 'that green is not red,' &c. are the consequences of more universal innate principles, since the particular propositions are known and assented to by those who are ignorant of the more general maxims.

If it be said that these propositions, viz. 'that 1 and 2 are equal to 3,' 'green is not red,' &c. are not general maxims, nor of any great use; yet if general assent be a certain mark of innate, whatever proposition is assented to as soon as heard and understood, must be innate, as well as the maxim, 'that it is impossible for the same thing to be and not to be.' The more general maxims are more remote from being

innate, as it is longer before they are admitted into the understanding. The usefulness of these maxims will be considered hereafter.

But the assenting to propositions at the first hearing and understanding the terms, is a proof that they are not innate, since it supposes some other things known before them. If innate, why need they be proposed, when, by being in the understanding, they could not but be known before? Or if proposing them print them clearer in the mind, then a man knows them better than he did before, and these principles may be made more evident by the teaching of others than by the impressions of nature, which makes them of little authority, and unfit to be, as they are pretended, the foundations of all our other knowledge. When a man becomes acquainted with a self-evident truth, he finds that he begins to know what he knew not before, and what he thenceforth never questions, not because it was innate, but because the nature of things will not allow him to think otherwise. And if whatever is assented to at first hearing passes for innate, every well-grounded observation must be innate; but these observations only sagacious minds first light on; and unobserving men, hearing them proposed, cannot but assent to them.

If it be said that the understanding hath an implicit though not an explicit knowledge of these principles before hearing them, it is hard to conceive what more is meant by this than that the mind is capable of understanding them; on which ground all mathematical demonstrations must be received as native impressions, which few mathematicians will be forward to believe.

There is a farther weakness in the argument which would prove those maxims to be innate which men admit at first hearing without any demonstration, but on a bare explication of the terms; for it labors under the fallacy that men are not supposed to learn any thing

de novo, whereas it is evident that they must have learned the terms and their signification, neither of which were born with them; and they must also have acquired a knowledge of the ideas which are the subject of the proposition. So that, in all such propositions, the terms, their meaning, and the ideas they stand for are not innate, and what then remains of them that is innate? By degrees we get ideas of names, and learn their connexion; and to propositions, made in terms that we understand, we at first hearing assent; but to other propositions equally evident, of which we have not acquired the ideas, we are incapable of assenting. A child assents to the proposition 'that an apple is not fire,' having in his mind the ideas, and having learnt that the names 'apple' and 'fire' stand for them; but it will be some years later before he assents to the proposition, 'that it is impossible for the same thing to be and not to be;' for though the words are as easily learnt, yet their signification being more comprehensive than the names of sensible things, it is longer before he learns their meaning, and acquires the general ideas they stand for. But when he has acquired the ideas and learnt the names, he assents to the one as well as to the other proposition, and for the same reason; viz. because he finds the ideas in his mind agree or disagree, according as the words standing for them are affirmed or denied one of another. To propositions made in words, for which he has no ideas, he gives neither assent nor dissent, but is ignorant.

To conclude the argument of universal consent, I agree with the defenders of innate principles, that if they are innate, they must have universal assent; but then, by these men's confession, they cannot be innate, for they are not assented to by those who understand not the terms, nor by those who have never thought of the propositions.

But that I may not be accused of arguing from the

thoughts of infants, which must be unknown, I say next, that these two general propositions are not antecedent to all acquired notions, which, if innate, they needs must be. There is certainly a time when children begin to think ; and can it be supposed that they are then ignorant of the notions which nature has imprinted, if there be any such ? Can it be imagined that they perceive impressions from things without, and are ignorant of the characters stamped within ? Can they receive adventitious notions, and be ignorant of those which are woven into the very principles of their being, as the foundation and guide of all their conduct and reasoning ? If so, those are improperly supposed the foundations of all our knowledge, which are not first known, and without the knowledge of which many other things may be known. The child knows that the nurse, who feeds it, is not the cat it plays with, or the black man it is afraid of ; but is it by virtue of the principle, ‘ that it is impossible for the same thing to be and not to be ? ’ Has a child any notion of that proposition, at an age wherein it is yet plain, it knows a great many other truths ?

Though, therefore, there be several propositions that are readily assented to by men who have acquired abstract ideas, and learnt the names standing for them ; yet as they are not found in children who yet know other things, they are not universally assented to by intelligent persons, and so not innate : for an innate truth, if there be such, must be known to any one who knows any thing else. An innate truth must be an innate thought, there being nothing a truth in the mind that it has never thought on.

That the above general maxims are not universally known, is sufficiently proved ; but there is a further argument against their being innate ; for if they be so, they should appear strongest in children, idiots, savages, and illiterate persons, whose native thoughts have not been cast into new moulds by education, and who

have not by foreign doctrines and studies confounded the characters which nature has written on their minds. But amongst this description of persons what general maxims are to be found? A child knows his nurse and his cradle, and by degrees the playthings of a little more advanced age; a young savage has his head filled with love and hunting; but he that from a child or wild inhabitant of the woods will expect abstract maxims, will find himself disappointed. Such propositions are seldom mentioned in the huts of Indians, much less are they to be found in the thoughts of children, or in the minds of naturals.

On the whole, I cannot see any ground to think these two famed speculative maxims innate, since they are not universally assented to; and the assent which they find is no other than what several propositions, confessedly not innate, partake with them; and since the assent they receive comes not from natural inscription, but from some other way. And if these first principles of knowledge are not innate, no other speculative maxims can pretend to be so.

CHAPTER III.

No innate practical Principles.

If the speculative maxims above mentioned have not a universal assent, it is much more clear that no practical principles have a universal reception. There is no moral rule which can pretend to so ready an assent as 'what is, is,' and 'that it is impossible for the same thing to be and not to be.' Not that moral principles are not equally true, but they are not equally evident. They require some exercise of the mind to discover the certainty of their truth. But this is no derogation to their truth, any more than it is to the truth of the three angles of a triangle being equal to two right ones, because it is not so evident as

‘the whole is bigger than a part.’ Moral rules are capable of demonstration, and it is our fault if we know them not; but the ignorance in which some men are of them, and the slowness with which others receive them, prove them not innate.

Where is the practical truth that is universally received, as it must be if innate? Justice, and keeping of contracts, is that which most men seem to agree in; it is a principle extending to thieves; and they who have gone farthest in putting off humanity itself, keep faith, and the rules of justice, one with another. But they receive these not as laws of nature, but as rules of conscience: for he who acts fairly with his fellow-robber, but plunders honest men, does not embrace justice as a practical principle.

It may be said, that the tacit assent of their minds agrees to what their practice contradicts. I answer, 1. actions are the best interpreters of thought. But since the practice of many, and the professions of some, have denied these principles, they are not of universal consent, and, therefore, not innate; 2. practical principles must produce conformity of action, otherwise they cannot be distinguished from speculative maxims. Nature, I confess, has put into man a desire of happiness and an aversion to misery; these, indeed, are innate practical principles, which, as practical principles ought, do continue constantly to operate and influence all our actions without ceasing: these may be observed in all persons and in all ages, steady and universal; but these are inclinations of the appetite to good, not impressions of truth on the understanding. I deny not that there are natural tendencies imprinted on the minds of men, and that from the very first instances of sense and perception, there are some things that are grateful and others unwelcome to them; but this makes nothing for innate characters on the mind, which are to be the principles of knowledge regulating our practice. Such natural impressions on

the understanding are so far from being confirmed hereby, that this is an argument against them, since if there were certain characters imprinted by nature on the understanding, as principles of knowledge, we could not but perceive them constantly operate in us, and influence our knowledge, as we do those others on the will and appetite, which never cease to be the constant springs and motives of all our actions, to which we perpetually feel them strongly impelling us.

Another argument against innate practical principles is, that there cannot be any moral rule proposed, for which a man may not justly demand a reason, which would be absurd if they were innate, or so much as self-evident, which every innate principle must needs be. It would be ridiculous to ask or to attempt to give a reason why it is impossible for the same thing to be and not to be. But if that most unshaken rule of morality, and foundation of all social virtue, 'that one should do as he would be done unto,' should be proposed to any one who could understand the terms, he might ask a reason why; and he that proposed it might prove its truth and reasonableness. So that the truth of these rules depends on some other antecedent to them, and from which they must be deduced, so that they are neither innate nor self-evident.

That men should keep their compacts is an undeniable rule in morality; but if a Christian be asked why, he will answer, because God, who has the power of eternal life and death, requires it of us: an Hobbist will say that the public requires it, and the Leviathan will punish you if you do not; and the old heathen philosophers would have answered, because it was below the dignity of a man to do otherwise.

Hence flows that variety of opinions concerning moral rules, according to the different sorts of happiness that men propose to themselves, which would not be if practical principles were innate. I grant the existence of God is so manifest, and the obedience we

owe him so congruous to the light of reason, that great part of mankind give testimony to the law of nature; yet several moral rules receive a general approbation from mankind, without admitting the true ground of morality, which is the will of God. For God having inseparably connected virtue and public happiness, it is no wonder that every one should recommend those rules to others, from whose observance of them he is sure to reap advantage. This, though it takes nothing from the eternal obligations of these rules, yet shows that the acknowledgment men pay to them in words proves not that they are innate; nay, proves not so much that men assent to them as the rules of their own practice, since we find that self-interest makes many own an outward approbation of them, whose actions prove that they consider not the Lawgiver that prescribed these rules, nor the punishment he has ordained for those who transgress them. For if we think men's actions to be the interpreter of their thoughts, we shall find that they have no such internal veneration for these rules. The rule, 'to do as one would be done to,' is frequently broken; yet to teach others that it is not obligatory, would be thought contrary to the interest men sacrifice to when they break it themselves.

Perhaps conscience will be urged as checking us for these breaches, and so the internal obligation of the rule be preserved. I answer, that many men, by the same way that they come to the knowledge of other things, may come to assent to moral rules and obligations; others may come to be of the same mind from education or custom, which persuasion, however got, will serve to set conscience on work, which is but our own judgment of our actions; and if conscience be a proof of innate principles, contraries may be innate, since some from conscience prosecute what others from conscience avoid. But I cannot see how any men should transgress those moral rules, were they innate

and stamped on their minds. View an army at the sacking of a town, and see what sense of moral principles or what touch of conscience they feel for all that they do. And if we look abroad to take a view of men as they are, we shall find that they have remorse in one place for doing or omitting that, which others in another place think they merit by. Where then are those innate principles of justice, piety, gratitude, equity, chastity? Or where is that universal consent, that assures us there are such inbred rules? Murders in duels, when fashion has made them honorable, are committed without remorse; nay, in many places, innocence in this case is the greatest ignominy.

He that will carefully peruse the history of mankind, will be able to satisfy himself that there is scarcely any principle of morality, (those only excepted which hold society together, which commonly are neglected between distinct societies) which is not slighted by whole societies of men.

Here it may be objected, that it is no argument that the rule is not known, because it is broken. Men may sometimes transgress, yet disown not the law; but it is impossible to conceive that a whole nation should renounce what every one of them know to be a law. Men may sometimes own rules of morality, which they do not believe to be true, only to keep up their reputation with others who believe them; but it is not to be imagined that a whole society of men should cast off a rule which they could not but be certain was a law, knowing that all with whom they should have to do regarded it as such, and therefore expose themselves to the contempt due to such as profess themselves void of humanity. Whatever practical principle is innate must be known to be just and good; it is therefore a contradiction to suppose that whole nations should give the lie to what they know to be right and good.

But farther, though the breaking of a rule is no

argument that it is unknown, yet the generally allowed breach of it is proof that it is not innate. For example, let us take any rule which the fewest people have denied or doubted. None can have a fairer pretence to be innate than this : ' Parents, preserve and cherish your children.' If this be an innate rule, it is either a principle which directs the actions of all men, or a truth which all men assent to. 1. That it is not a principle which influences all men's actions, we need not seek to prove by reference to savage and barbarous nations, when we remember that it was an uncondemned practice among the Greeks and Romans to expose their innocent infants. 2. That it is an innate truth is so far false that it is no truth at all, being a command, and not a proposition, and so not capable of truth or falsehood. To make it capable of truth it must be reduced to a proposition, as ' It is the duty of parents to preserve their children.' But duty cannot be supposed without a law, nor a law without a lawgiver, or without reward and punishment. So that it is impossible that this or any other practical principle should be innate, without supposing the ideas of God, of law, of obligation, of punishment, of a life after this, innate. But these ideas are so far from being innate, that it is not every thinking man, much less every one that is born, in whom they are to be found clear and distinct.

From what has been said we may conclude that, whatever practical rule is in any place allowedly broken, cannot be supposed innate, it being impossible that men should confidently break a rule which they could not but know that God had set up, and of which he would punish the breach, which they must know if it were innate. Doubt of the law, or hope to escape the power of the Lawgiver, may make men give way to a present appetite; but let them see the pleasure tempting, and the hand of the Almighty visibly held up to take vengeance;

then tell me, whether it be possible for people with such a certain knowlege wantonly to offend against a law which stares them in the face while breaking it? whether it be possible, that whilst a man thus bids defiance to this innate law, all the bystanders, who have the same sense of the law, should silently connive at the breach of it? Principles of action are lodged in men's appetites, but these, so far from being innate moral principles, would, without restraint, overturn all morality. Moral laws are set as a curb to these desires, proposing rewards and punishments that may overbalance the immediate gratification of a breach of the law. If, therefore, any thing be imprinted on the mind as a law, every one must have a certain knowlege of the punishment that will attend the breach of it; for if men can be doubtful of what is innate, innate principles are insisted on to no purpose. I would not here be mistaken, as if, because I deny an innate law, I thought there were none but positive laws. There is a difference between an innate law and a law of nature, between something originally imprinted on our minds and something we may attain by our natural faculties: and they are equally wrong who affirm an innate law, and who deny a law ascertainable by the light of nature.

The difference among men in their practical principles is such, as to make it impossible to find out innate moral rules by general assent; and they who suppose such principles, are sparing to tell us which they are. But were there any such, there would be no need to teach them; there would be nothing more easy than to know what and how many they were; there could be no more doubt about their number than there is about the number of our fingers. Now, if men of different sects should go about to give us a list of those innate practical principles, they would set down only such as supported their own doctrines; a plain

evidence that there are no such innate truths. Nay, there are many who, denying freedom to mankind, make men mere machines, taking away innate and all moral rules whatsoever, and leave not a possibility to believe any such, to those who cannot conceive how any but free agents can be capable of law. On that ground, they who cannot reconcile morality and mechanism (which is not very easy) must reject all principles of virtue.

When I had written this, being informed that Lord Herbert had, in his book '*De Veritate*,' assigned these innate principles, I presently consulted him, in hopes to put an end to my inquiry. In the chapter '*De Instinctu Naturali*,' I met with these six marks of his '*Notitiæ Communes*:' '1. Prioritas. 2. Independentia. 3. Universalitas. 4. Certitudo. 5. Necessitas,' i. e. as he explains it, '*faciunt ad hominis conservationem. 6. Modus conformationis, i. e. assensus, nulla interposita mora.*' At the latter end of his treatise '*De Religione Laici*,' he says this of his innate principles: '*Adeo ut non uniuscujusvis religionis confinio arcentur quæ ubique vigent veritates. Sunt enim in ipsa mente cælitus descriptæ, nullisque traditionibus, sive scriptis, sive non scriptis, obnoxia,*' p. 3. and, '*Veritates nostræ Catholicæ, quæ tanquam indubia Dei effata in foro interiori descriptæ.*' Thus having given the marks of the innate principles, and asserted their being printed on the minds of men by the hand of God, he proceeds to set them down, and they are these: '1. *Esse aliquod supremum numen. 2. Numen illud coli debere. 3. Virtutem cum pietate conjunctam optimam esse rationem cultus divini. 4. Resipiscendum esse a peccatis. 5. Dari præmium vel pœnam post hanc vitam transactam.*' Though I allow these to be clear truths, and such as, if rightly explained, a rational creature can hardly avoid giving his assent to; yet I think he is far from proving them innate.

For 1. These five propositions are either not all, or more than all, those common notions written on our minds by the finger of God, if any at all be so written : since there are other propositions which, even by his own rules, have as just a pretence to be innate, as some that he enumerates ; such as, ' Do as thou wouldest be done unto,' &c.

2. All his marks are not found in each of his propositions, viz. his first, second, and third marks agree perfectly to neither of them ; and the first, second, third, fourth, and sixth marks agree but ill to his third, fourth, and fifth propositions. For besides that we know that whole nations disbelieve some of them, I cannot see how the third can be an innate principle, when the term ' virtue ' is liable to so much uncertainty ; and the thing it stands for so much contended about ; this therefore can be but an uncertain rule of conduct, and very unfit to be assigned as an innate practical principle. For let us consider this proposition as to its meaning, (for the sense, not the sound, must be the common notion) viz. ' Virtue is the best worship of God,' which, if virtue be taken for those actions which are accounted laudable in different countries, is so far from being certain, that it is not true. If virtue be taken for actions conformable to the will of God, then the proposition will be true, but of very little use in human life ; since it will amount only to this, viz. ' That God is pleased with the doing of what he commands ;' which a man may know to be true without knowing what God commands. And few will take a proposition, which teaches so little, for an innate moral principle written on the minds of all men.

Nor is the fourth proposition more instructive ; for as the word ' peccata,' or ' sins,' is used to signify actions that will draw punishment on the doers, what principle of morality can that be which tells us we should be sorry for that which will bring mischief on

us, without informing us what those actions are that will do so? The proposition is true, and should be inculcated on those who know what actions are sins, but neither this nor the former can be imagined innate, or of any use if innate, unless the measures and bounds of all vices and virtues were innate principles also. I therefore imagine it will scarcely seem possible that God should engrave principles on men's minds in words of uncertain signification, or in words at all, which being in most of these principles very general names, cannot be understood but by knowing the particulars comprehended in them. And in practical instances the measures must be taken from the actions themselves, and the rules of them abstracted from words; which rules a man must know, whatever language he chance to learn, or if he should learn no language at all. When it shall be made out, that men ignorant of words or the customs of their country, know that it is part of the worship of God, not to kill, not to steal, not to commit adultery, and that when we have done the contrary, we ought to repent and do so no more, and a thousand other such rules, there will be more reason for admitting these and the like for common notions; yet, after all, universal consent to truths, the knowledge of which may be attained otherwise, would scarcely prove them to be innate.

Nor will it avail to say that the innate principles of morality may be, by education and custom, quite worn out of the minds of men. For this takes away the argument of universal consent, by which the opinion of innate principles is endeavored to be proved; unless those men think that their private persuasion, or that of their party, should pass for universal consent, and then their argument stands thus: 'The principles which all mankind allow for true are innate; those that men of right reason admit, are the principles allowed by all mankind; we, and those of our mind, are men of reason; therefore we

agreeing, our principles are innate.' For, otherwise, it will be hard to understand how there are principles in which all men agree, but which may be blotted out of the minds of some men; which is saying that all men admit, but many deny them. And indeed such first principles will be of very little use to us, if, by the will of our teachers or opinions of our companions, they may be altered or lost; and notwithstanding the boast of this innate light, we shall be as much in the dark as if there were no such thing at all; it being all one to have no rule at all, as one that will warp any way. But I desire these men to say whether innate principles can or cannot be blotted out by education and custom: if they cannot, we must find them in all men alike; and if they may suffer variation, then we must find them clearest nearest the fountain, in children and illiterate persons, who have received least impression from opinions. Let them take which side they please, they will find it inconsistent with facts.

I grant that there are opinions which are received by men of different countries, educations, and tempers, as first and unquestionable principles, many of which, from their contradiction, cannot be true. Yet all these propositions are somewhere or other so sacred, that men of good understanding in other matters will part with their lives rather than question them.

Strange as this may seem, it is confirmed by daily experience, and will not perhaps appear so wonderful, if we consider the ways by which it is brought about; and how doctrines, derived from the superstition of a nurse, may, by length of time and consent of neighbors, grow up to the dignity of principles in religion or morality. For such who are careful, as they call it, to principle children well, instil into the yet unprejudiced understanding (for white paper receives any characters) those doctrines they would have them retain. These doctrines, being confirmed by the profession or consent of all they have to do with, and of

whose wisdom, knowlege, and piety they have an opinion, and being never mentioned but as the basis on which they build their religion and manners, come to have the reputation of self-evident and innate truths. To which we may add, that when men thus instructed find on reflection nothing more ancient than the opinions taught before memory began to register their actions, they conclude that those propositions, of whose knowlege they can find in themselves no original, were the impress of God and nature on their minds. These they submit to, as children to their parents, not because it is natural, but because, having been so taught, and having no remembrance of the beginning of this respect, they think it natural.

This will appear almost unavoidable if we consider the nature of man and the constitution of human affairs; and that most men cannot live without employing their time in the daily labors of their calling, nor be quiet in their minds without some foundation or principle on which to rest their thoughts. There is scarcely any one who hath not some revered propositions on which he founds his reasoning, and by which he judgeth of truth and falsehood, right and wrong; which some cannot, and others from fear will not examine; so that few are to be found who are not exposed by ignorance, laziness, education, or precipitancy to take them on trust.

Custom, a greater power than nature, seldom fails to make children worship for divine, what she has once inured them to bow their minds to; it is no wonder then that grown men, perplexed in the affairs of life, or hot in the pursuit of pleasure, should not seriously sit down to examine their own tenets; especially when one of their principles is, 'that principles ought not to be questioned.' Who is there, that dares shake the foundation of all his past thoughts and actions, contend with the reproach prepared for those who venture to dissent from the opinions of their

country or party, and patiently prepare himself to bear the name of 'whimsical,' 'sceptical,' or 'atheist,' which he is sure to meet with who dares in the least scruple any of the common opinions? Much less will he dare to question those principles, when he shall think them (as most men do) the standards set up by God in his mind, to be the rule and touchstone of all other opinions; and what can hinder him from thinking them sacred, when he finds them the earliest of all his own thoughts, and most revered by others?

It is easy to imagine how by these means it comes to pass that men worship the idols that have been set up in their minds, become zealous votaries to bulls and monkeys, and are ready to die in defence of their opinions. For since the reasoning faculties, which are constantly but not always wisely employed, could not move for want of a foundation, in most men who do not or cannot penetrate into the principles of knowledge, it is natural for them to take up borrowed principles, which being presumed proofs of other things, are not thought to need proof themselves. Whoever shall reverentially receive these notions without examining them, may take up, from his education and the fashions of his country, any absurdity for innate principles, and mistake the monsters of his own brain for the images of the Deity.

That by this progress many arrive at principles which they believe to be innate, may be observed by the opposite principles contended for by all sorts of men. It is difficult otherwise to account for the confidence with which contrary tenets are asserted and believed. And, indeed, if innate principles are to be believed without examination, I know not what may not be believed; if they may be examined, it is reasonable to demand by what marks they may be known; when this is done, I shall be ready to embrace such useful propositions; till then, I may doubt,

since universal consent, which is the only one produced, will scarcely prove a sufficient mark to direct my choice.

CHAPTER IV.

Other Considerations concerning the innate Principles, both speculative and practical.

Had those who contend for innate principles, considered the parts out of which those propositions are made, they would not have been so ready to believe they were innate; since if the ideas were not, the propositions made up of them could not be innate. For if the ideas be not innate, there was a time when the mind was without those principles; for where there are no ideas, there cannot be any propositions about them.

We have little reason to think that children bring many ideas into the world with them; for except some faint ideas of hunger and thirst, and warmth and pain, there is not any appearance of ideas in them; and one may perceive that they get no other than those with which they are furnished by experience. 'It is impossible for the same thing to be and not to be,' is certainly, if there be any such, an innate principle; but will any one say that impossibility and identity are ideas, that men bring into the world with them, and are antecedent to all others? Is it the knowledge of this maxim that makes a child distinguish between its mother and a stranger? The names 'impossibility' and 'identity' stand for ideas so far from being innate, that it requires attention to form them in the understanding; and so remote from the thoughts of children, that many grown men are found to want them.

If identity be a native impression and known to us from our cradles, I would gladly be resolved, by one of seven or 70 years old, 'Whether a man, consisting of

soul and body, be the same man when his body is changed? Whether Euphorbus and Pythagoras, having had the same soul, were the same man, though they lived ages asunder? Whether the cock too, which had the same soul, were not the same with both of them?' Whereby it will appear that our ideas of identity are not so clear as to be thought innate; for if innate ideas be not universally known and agreed on, they cannot be the subject of universal truths. For, I suppose, every one's idea of identity will not be the same as that of Pythagoras and his followers. Which then shall be true?

Nor let any one think, that the questions here proposed are empty speculations, though, even then, they would show that the idea of identity is not innate. He that shall reflect on the resurrection, and consider that the same persons shall be happy or miserable in the other according to their conduct in this life, will find it not easy to resolve wherein identity consists, and will not think that children have a clear idea of it.

The axiom, 'that the whole is bigger than a part,' has as good a title as any to be thought innate; which nobody can think it to be when he considers that 'whole' and 'part' are relative ideas, and belong to the positive ideas 'extension' and 'number.' So that if whole and part are innate ideas, extension and number must be innate too.

'That God is to be worshipped,' is a great truth, and deserves the first place amongst practical principles, but cannot be thought innate unless the ideas of God and worship are innate. That the idea of worship is not in the understanding of children, will be granted by any one who considers how few grown men have a distinct idea of it.

If any idea can be imagined innate, that of God may of all others be thought so, since it is hard to conceive how there should be innate moral principles

without an innate idea of a Deity. Without a notion of a law-maker, it is impossible to have a notion of a law, and an obligation to observe it. Besides the ancient atheists, branded on the records of history, navigation has discovered, in these later ages, whole nations without any notion of a God, or any religion. Even the Jesuits, the great encomiasts of the Chinese, agree that the learned, keeping to the old religion and the ruling party there, are all of them atheists. And though in more civilised countries only some profligate wretches own it barefacedly now, yet, perhaps, we should hear more of it than we do from others, did not the fear of the magistrate's sword, or their neighbors censure, tie up people's tongues.¹

But had all mankind a notion of God, it would not follow that the idea was innate; for though no nation were found without a name or some notions of him, it would not prove them to be natural impressions any more than the names of 'sun,' 'fire,' &c. prove the ideas they stand for to be innate. Nor would the absence of such a name or notion be an argument against the being of a God, any more than it would

¹ This reasoning against innate ideas has been blamed as invalidating an argument used to prove the being of a God, viz. universal consent: to which our author answers, 'I think that the universal consent of mankind as to the being of a God amounts to this; that the majority have actually believed it, and that the majority of the remaining part have not actually disbelieved it, and very few have actually opposed the belief: so that as incomparably the greater majority have believed, it may be said to be the universal consent of mankind. But if a general consent of every individual should be contended for, this would make it no argument, or a useless one; for one denial would destroy it; and if no one deny a God, what need of arguments to convince atheists? I would ask, Were there ever any atheists in the world, or no? If not, what need of any question about the being of a God? If there have been, then the universal consent reduces itself to a great majority, and I have not said a word to invalidate this argument. My argument was to show that the idea of God is not innate; and to my purpose it was sufficient if there were one exception; for whatsoever is innate must be universal, in the strictest sense.'

be a proof that there was no loadstone in the world because a great part of mankind had no name or notion of it. For men being furnished with words can scarcely avoid having some ideas of the things whose names they frequently mention : and if these carry with them the notion of something extraordinary, if the fear of absolute power impress them on the mind, the idea is likely to sink deeper and spread farther, especially if it be agreeable to the common light of reason. For the marks of wisdom and power appear so plainly in the creation, that a rational and reflecting creature cannot miss the discovery of a Deity ; and the influence which such a discovery must have on the mind is so great, that it seems stranger that a whole nation of men should be found so brutish as to want the notion of God, than that they should have no notion of numbers or fire. The name of God being once mentioned to express a superior and almighty Being, the reasonableness of such a notion, and the interest men have to mention it often, must necessarily spread it wide, and continue it down to all generations ; though the general reception of the name proves not the idea to be innate, but that they who made the discovery made a right use of their reason, tracing things to their original, from whom others having once received the notion, it could not easily be lost again. This is all that could be inferred from the notion of a God were it universal ; for the general acknowledging of God extends no farther ; which if it prove the idea of God innate, will prove the idea of fire to be innate. If a colony of children should be placed in an island where no fire was, they would neither have any notion of it nor any name for it, and they would be as far removed from any notion or name of God till some one amongst them had employed his thoughts to inquire into the causes of things, which would lead him to a notion of

God, which being taught to others, reason would continue it amongst them.

It is urged, that it is suitable to God's goodness to imprint on the minds of men notions of himself to secure their homage and veneration, therefore he has done it. This argument, if it be of any force, will prove too much. For if we conclude that God hath done what men judge best for them, because it is suitable to his goodness, it will prove not only that God hath impressed on the mind an idea of himself, but that he hath stamped there all that men ought to do, and hath given them will and affections conformable.

The Romanists say, 'it is best for man, and suitable to the goodness of God, that there should be an infallible judge of controversies on earth, and therefore there is one;' and I, by the same reason, say, 'it is better for man, that every man himself should be infallible.' I leave them to consider whether they shall therefore think that he is so. It is good argument to say, 'the infinitely wise God hath made it so, and therefore it is best;' but it shows too much confidence in our own wisdom to say, 'I think it best, and therefore God hath made it so:' and it is vain to argue that God hath done what experience shows he hath not. But the goodness of God hath not been wanting to man, since he hath furnished him with faculties, by the right use of which he may attain the knowledge of God; and having endowed man with these faculties, he was no more obliged, by his goodness, to implant innate notions in his mind, than having given him hands and materials, he should build him houses and bridges, which some people totally want, or are but ill provided with, as others are either without ideas of God and duty, or have but very ill ones; the reason in both cases being, that they employed not their faculties that way, but contented themselves with the opinions and fashions of their country as they found them.

I grant that if there were any ideas to be found imprinted on the mind, we might expect it to be the notion of its Maker; but how late is it before such a notion is discoverable in children! And when we do find it, how much does it resemble the notion of the teacher! He that will observe the minds of children will find that the objects they most converse with make the first impressions on their minds; that their thoughts enlarge themselves as they become acquainted with more objects, and have skill to combine them. How by these means they frame an idea of the Deity I shall hereafter show.

Can it be thought that the ideas men have of God are engraven by his own finger, when we see in the same country that under one name men have contrary ideas of him? Their agreeing in name will scarcely prove an innate notion.

What notion of a Deity could they have who worshipped hundreds? Every deity they owned above one was an evidence that they had no true notion of his unity, infinity, and eternity. To which if we add their gross conceptions of corporeality and other qualities, which they attributed to their gods, we shall have little reason to think that they had ideas of God, of which he himself was the author.

If it be said, that the wise men of all nations come to have true conceptions of the Deity, I grant it; but then this excludes universality of consent, and proves that the best notions men had of God were not imprinted, but acquired by meditation. And if it be a reason to think the notion of God innate, because wise men had it, virtue too must be thought innate, for that also wise men have always had. How many, even amongst us, will be found to fancy God in the shape of a man! Christians, as well as Turks, have had whole sects contending that the Deity was corporeal. Talk with country people of any age, and young people of any condition, and you will find

their notions of God so low, that no one can imagine that they were taught by a rational man, much less by God himself. Nor does it derogate more from the goodness of God that he hath not furnished us with ideas of himself, than that he hath sent us into the world unclothed : for having faculties to attain these, it is want of industry in us, not of bounty in him, if we have them not. It is as certain that there is a God as that the opposite angles made by two straight lines are equal. No rational creature can fail to assent to the truth of these propositions ; but this universal consent proves not the idea of God, any more than it does the idea of such angles, innate.

Since then the idea of God is not innate, scarcely any other can pretend to be so ; for if God had set any impression on the understanding, it is most reasonable to expect it should have been some idea of himself.

There is another idea which would be of use for men to have, and that is the idea of substance, which we cannot have by sensation or reflection ; but by which we signify an uncertain supposition of we know not what idea, which we take to be the substratum or support of those ideas we do know.

Whatever we talk of innate principles, it may as well be said, that a man hath 100*l.* in his pocket, yet be denied that he hath any one coin out of which the sum is made up, as to think that propositions are innate, when the ideas about which they are cannot be supposed to be so. The assent given to propositions does not prove their ideas innate. Every one that hath an idea of God and worship will assent to the proposition, ‘ that God ought to be worshipped ;’ but such an assent on hearing, no more proves the ideas to be innate, than it does that one born blind had the innate ideas of sun and light, of saffron and yellow, because when his sight is cleared he will assent to the proposition, that the sun is lucid, or that saffron is yellow.

If there be in the mind any ideas which it does not actually think on, they must be in the memory, and when remembered must be known to have been in the mind before. Without this, whatever idea comes into the mind must be new, and not remembered; for whenever the memory brings any idea into actual view, it is with a consciousness that it had been there before, and was not wholly a stranger to the mind. Whatever therefore is not either actually in view or in the memory, is in the mind no way at all, and is all one as if it had never been there. I once talked with a blind man who had lost his sight when a child, and had no more notion of colors than one born blind. His cataracts are couched, and then he has ideas of colors *de novo*, without any consciousness of a former acquaintance. These he can now call to mind in the dark; in this case there is a consciousness of a former acquaintance; and being thus in the memory, they are said to be in the mind. By this it may be tried whether there be any innate ideas in the mind, before impression from sensation and reflection. I would fain meet with the man who, when he came to the use of reason, or at any other time, remembered any of them; and to whom, after he was born, they were never new. If any one will say, there are ideas in the mind that are not in the memory, I desire him to explain himself, and make what he says intelligible.

There is another reason why I doubt that these principles are innate: I cannot satisfy myself why the infinitely wise God should be supposed to print on the mind innate speculative principles of no great use, and those that concern practice not self-evident, and neither of them distinguishable from other truths not innate. If any one thinks there are innate principles distinguishable from all that are acquired, it will not be hard for him to tell us which they are; since if there be such innate principles different from all other

perceptions and knowlege, every one will find it true in himself.

To conclude ; some truths are seen as soon as proposed, and others require deductions made with attention, before they can be discovered and assented to. The former, from their easy and general reception, have been mistaken for innate. But ideas and notions are no more born with us than arts and sciences, though some are more readily received than others, according as our faculties are employed. The difference in the notions of mankind is from the different use of their faculties ; some take things on trust, enslaving their minds to the dominion of others ; others, employing their thoughts about some few things, grow acquainted with them, and are ignorant of all other. Thus, that the three angles of a triangle are equal to two right angles, is a certain truth, yet there are millions who know it not ; and he that knows this proposition may be ignorant of other propositions in mathematics which are as clear as this, because, in his search of those truths, he went not so far. The same may happen concerning our notions of a Deity ; for though there be no truth which may be more evidently made out than the existence of a God, yet he that shall not make inquiry into the causes of things, and pursue those thoughts with attention, may live long without the notion of such a Being ; and if any person put such a notion into his head, he may yield his assent as to a probable opinion, but he hath no knowlege of the truth of it.

What censure this doubting of innate principles may deserve from men who will be apt to call it pulling up the old foundations of truth, I cannot tell. I persuade myself that I have laid those foundations surer. Truth has been my only aim ; and wherever that has appeared to lead, my thoughts have followed. With all due respect to other men's opinions, it will

not be arrogant to say, that we should make greater progress in the discovery of knowledge if we sought it in the consideration of the things themselves, and made use rather of our own thoughts, than other men's, to find it. For we may as rationally hope to see by other men's eyes, as to know by other men's understandings. In science every one has as much as he comprehends; what he takes on trust makes no addition to his stock: such borrowed wealth, like fairy money, though it were gold in the hand from which he received it, will be but leaves and dust when it comes to use.

When men found some propositions that could not be doubted, it was easy to conclude them to be innate. This being received, it eased the lazy from the pains of search, and stopped the inquiry of the doubtful. And it was an advantage to teachers to establish the principle 'that principles are not to be questioned;' and having once established, that there are innate principles, it put their followers on taking them without examination, in which posture of blind credulity they might be more easily governed. Whereas, had they examined the way whereby men came to the knowledge of many truths, they would have found that they were discovered by the application of those faculties that were fitted by nature to judge of them.

To show how the understanding proceeds herein is the design of the following discourse, which I shall proceed to, when I have premised, that hitherto, to clear my way to the true foundations of knowledge, it has been necessary to give an account of the reasons I had to doubt of innate principles. And since the arguments which are against them rise from common received opinions, I have unavoidably taken several things for granted; it happening in controversies as in sieges, where, if the ground be firm on which the batteries are erected, there is no inquiry from whom it is borrowed, or to whom it belongs. But in the future

part of this discourse, designing to raise a consistent and uniform edifice, I hope to erect it on such a basis, that I shall not need to shore it up with buttresses leaning on borrowed foundations ; or if it prove a castle in the air, I will endeavor that it shall be all of a piece. Wherein I warn the reader not to expect undeniable demonstrations, unless I be allowed the privilege, not seldom assumed by others, to take my principles for granted. All I shall say for the principles I proceed on, is, that I appeal to experience and observation for their truth ; and this is enough for a man who only professes to lay down his own conjectures concerning a subject lying somewhat in the dark, without any other design than an inquiry after truth.

BOOK II.

CHAPTER I.

Of Ideas in general, and their Original.

EVERY man being conscious that he thinks, and that which his mind is employed about being the ideas which are there, it is past doubt that men have ideas which are expressed by the words whiteness, hardness, motion, man, &c. The inquiry is, how he comes by them? Having examined the received doctrine, that men have innate ideas, what I have there said will be more freely admitted when I have shown by what ways ideas come into the mind, for which I shall appeal to every one's own experience and observation.

Let us then suppose the mind to be as white paper, void of all characters, without any ideas; whence has it all its materials of reason and knowledge? I answer, from experience. Our observation, employed about external sensible objects, or about the internal operations of our minds, supplies our understandings with all the materials of thinking.

First, our senses convey to the mind perceptions of things according to the ways in which external objects affect them, and thus we have the ideas of heat, cold, soft, hard, and all sensible qualities. This source of our ideas I call sensation.

Secondly, the perception of the operation of our own minds furnishes the understanding with another set of ideas, such as perception, thinking, doubting, believing, reasoning, knowing, willing, and all the

different actings of our own minds. This source of ideas every man has in himself; and as I call the other sensation, I call this reflection, the ideas it affords being such as the mind gets by reflecting on its own operations within itself. The term operation I here use, as comprehending not barely the actions of the mind about its ideas, but some sort of passion arising sometimes from them, such as the satisfaction or uneasiness arising from any thought.

The understanding seems to me not to have any ideas which it does not receive from one of these two sources; for let any one examine his thoughts, and then let him say, whether all the original ideas he has there are any other than of the objects of his senses, or of the operations of his mind; considered as objects of reflection.

A child, at its first coming into the world, seems not to be stored with many ideas: it is by degrees that he is furnished with them; and though ideas of familiar objects imprint themselves before memory keeps a register of them, yet it is often so late before some unusual qualities come in the way, that few cannot recollect their first acquaintance with them; and a child might be so ordered as to have few of the ordinary ideas till he were grown up.

Men come to be furnished with ideas from without, in proportion to the variety of objects with which they converse; and from the operations of their minds within, according as they more or less reflect on them. For though he that contemplates the operations of his mind may have clear ideas of them, yet, unless he considers them attentively, he will no more have distinct ideas of them than he will of the motions of a clock to which he never directs his eyes. Hence it is late before children get ideas of the operations of their minds, because, like floating visions, they make not impression enough to leave distinct ideas. Children, when they first come into the world, are surrounded

with a variety of changing objects, so that they are diverted by looking abroad; and, growing up in a constant attention to outward sensations, they make little reflection on what passes within.

To ask when a man begins to have ideas is to ask when he begins to perceive, having ideas and perception being the same thing. It is an opinion, that the soul always thinks; that thinking is as inseparable from the soul as extension is from the body: by this account the soul and its ideas begin to exist at the same time.

But whether the soul exist antecedent to, coeval with, or some time after the beginning of life in the body, I leave to others. I confess myself to have one of those dull souls that doth not always perceive itself to contemplate ideas, nor can I conceive it more necessary for the soul always to think than for the body always to move, perception being, as I conceive, to the soul, what motion is to the body; not its essence, but one of its operations. We know by experience that we sometimes think, and we conclude that there is something in us that has the power of thinking; but whether that substance always thinks, we can be no farther assured than experience informs us. To say that thinking is essential to the soul, is begging the question; but he that would not deceive himself ought to build his hypothesis on fact, and not presume the fact for the sake of his hypothesis.

I grant that the soul of a waking man is never without thought; but sleeping without dreaming may be an affection of the mind as well as body, it being hard to conceive that a man should think, and not be conscious of it. If the soul doth think in a sleeping man, without being conscious of it, has it pleasure or pain? For to be happy or miserable without being conscious of it seems utterly impossible. Socrates awake and Socrates asleep is not the same person, for the waking Socrates has no knowledge of the happiness

or misery which his soul experiences when he is asleep ; and if we take away a consciousness of our sensations, it will be hard to know wherein to place personal identity.

If the soul thinks during profound sleep, it must be conscious of its perceptions ; but the sleeping man is conscious of nothing of all this. Let us suppose the soul of Castor separated from his body during sleep to think apart, and let it choose for its place of thinking the body of Pollux, who is sleeping without a soul, for if it thinks what Castor is not conscious of, it is no matter what place it thinks in. We have here two bodies with one soul between them, which we will suppose to sleep and wake by turns ; the soul still thinking in the waking man, of which the sleeping man is never conscious. Are not Castor and Pollux two persons as distinct as Castor and Hercules ? and might not one of them be happy and the other miserable ? By the same reason, they make the soul and man two persons, who make the soul think what the man is not conscious of : for no one will make personal identity consist in the soul's being united to the same numerical particles of matter ; for then it will be impossible that any man should be the same person two days or moments together.

It will be said that the soul thinks in the soundest sleep, but the memory retains it not. That the soul should be this moment busy in thinking, and the next moment not be able to recollect one jot of those thoughts, is very hard to be conceived. Most men pass a great part of their sleep without dreaming. I knew a man who told me that he had never dreamed till he had a fever, which was about the 25th year of his age.

To think without retaining it for a moment is a useless sort of thinking : the soul is thus no better than a looking-glass, which receives a variety of images, and retains none. Perhaps it will be said, that in a waking man, the body is employed in think-

ing, and that traces are left on the brain ; but that in a sleeping man the soul thinks apart, and leaves no impression on the body. Not to mention the absurdity of two distinct persons, which follows from this supposition, I answer farther, that what the mind can receive, it may also retain without the body, or the soul has but little advantage in thinking. If it has no memory of its thoughts, and can make no use of its reasonings, to what purpose does it think ? Characters drawn on the dust, that the first breath of wind effaces, are as useful as the thoughts of a soul that perish in thinking. And it is hardly to be conceived that the infinitely wise Creator should make so admirable a faculty as the power of thinking to be so uselessly employed, at least a fourth part of its time, as to think constantly without remembering its thoughts, or being useful to itself or others.

It is true we have instances of perception while we are asleep, which for the most part are extravagant and incoherent. Now I would ask, whether the soul, when it thinks apart from the body, acts less rationally than when conjointly with it, or no :—if less rationally, then the soul owes its perfection to the body ; if more rationally, it is a wonder that our dreams should be so frivolous, and that the soul should retain none of its more rational meditations.

Those who tell us that the soul always thinks, should tell us what are the ideas of the soul of a child before it receives any by sensation. The dreams of a sleeping man are, as I take it, made up of the waking man's ideas ; but it is strange, if the soul has ideas of its own, not derived from sensation or reflection, that it should never retain any of them. If it always thinks, and so had ideas before it received any from the body, it is not to be supposed, but that, during sleep, it recollects its native ideas ; which, since the waking man never remembers, we must conclude that the soul remembers something which the man does

not, or that memory belongs only to ideas derived from the body. I would also be glad to learn from these men, how they come to know that they think when they do not perceive it. The utmost that can be said is, that the soul may always think, but not always retain it; and I say, it is as possible that the soul may not always think, which is more probable than that it should think, and the next moment forget that it had thought.

They who tell us that the soul always thinks, do not say that a man always thinks. Can the soul think, and not the man; or a man think, and not be conscious of it? To say that the man thinks always, but is not conscious of it, is as unintelligible as to say that a body is extended without parts, or that a man is always hungry but does not always feel it; whereas hunger consists in the very sensation, as thinking consists in being conscious that one thinks. If they say that a man is always conscious to himself of thinking, I ask, how they know it? Wake a man out of sleep, and ask him what he was thinking on? If he himself be conscious of nothing he then thought on, he must be a notable diviner of thoughts, that can assure him that he was thinking. They must needs have a penetrating sight, who can see that I think, when I cannot perceive it myself: this some may suspect to be a step beyond the Rosicrucians; it seeming easier to make one's self invisible to others, than to make another's thoughts visible to me which are not visible to himself. But it is but defining the soul to be a substance that always thinks, and the business is done. Such definition, however, may make some men suspect that they have no souls, since they find much of their lives pass away without thinking.

I see no reason, therefore, to believe that the soul thinks before the senses have furnished it with ideas. He that will suffer himself to be informed by experience and observation, will find few symptoms of

thinking in a new-born child, and fewer still of reasoning. Follow a child from its birth, and you shall find that as the mind by the senses comes more to be furnished with ideas, it comes to be more awake. It comes by degrees to distinguish strangers from the persons with whom it daily converses, which are effects of its retaining and distinguishing the ideas the senses convey to it; and by degrees the mind advances to the exercise of the other faculties of enlarging, compounding, abstracting, and reasoning.

If it be asked when a man begins to have any ideas, the true answer is, when he first has any sensation; for since there appear not to be any ideas in the mind before the senses have conveyed any in, I conceive that ideas are coeval with sensation. The mind first employs itself about the impressions made on the senses, in perception, remembering, consideration, reasoning, &c. In time the mind reflects on its own operations, and stores itself with what I call ideas of reflection. Thus the impressions made on our minds by outward objects, and the reflection of the mind on its own operations, are the original of all our knowledge. In this part the understanding is merely passive; the objects of our senses obtrude their ideas on the mind whether we will or no; and the operations of our minds will not let us be without some obscure notions of them. These simple ideas the mind can no more refuse, alter, or obliterate, than a mirror can refuse, alter, or obliterate images which the objects set before it do therein produce.

CHAPTER II.

Of Simple Ideas.

Of ideas, some are simple and some complex. Though the qualities which affect our senses are in the things themselves united and blended, yet the ideas they produce enter the mind simple and unmixed: for

though sight and touch may take from the same object at the same time different ideas, as the eye may see motion and color, the hand feel warmth and softness ; yet the ideas thus united in the same subject are as distinct as those which come in by different senses.

The simple ideas, the materials of all our knowledge, are furnished to the mind only by sensation and reflection. When the understanding is stored with these simple ideas, it can compare and unite them, and form complex ideas at pleasure : but it is not in the power of any understanding to form one new simple idea, not taken in by the ways above-mentioned, nor can it destroy those that are there ; the dominion of man in the little world of his mind being the same as in the visible world, where he can only compound and divide, but can neither make nor destroy one particle of matter. Let any one try to fancy a taste which has never affected his palate, or scent which he has never smelt : if he can do this, the blind may have ideas of color, and the deaf of sounds. Hence, though it be possible for God to make creatures with more than five senses, yet it is not possible for us to imagine other qualities in bodies than sounds, tastes, smells, visible and tangible qualities ; and had we been formed with four senses only, the objects of the fifth had been as far from our conception as now any belonging to a sixth or seventh can be. I have here followed the common opinion of man's having but five senses, though, perhaps, there may be justly counted more ; but either supposition serves equally to my present purpose.

CHAPTER III.

Of Ideas of one Sense.

Ideas come into our minds, 1. by one sense only ; 2. by more than one sense ; 3. by reflection only ; and, 4. by all the ways of sensation and reflection.

1. There are some ideas which have admittance only through one sense; thus light and colors come in only by the eyes, sounds by the ears, tastes and smells by the nose and palate; and if these organs are any of them so disordered as not to perform their functions, the ideas have no other way of being perceived by the understanding. The most considerable of those belonging to the touch are heat, cold, and solidity, the rest consisting almost wholly in the sensible configuration, as smooth and rough, or the more or less firm adhesion of the parts, as hard, soft, rough, brittle.

It is needless, and would be impossible, to enumerate all the particular simple ideas belonging to each sense, there being more of them than we have names for. The variety of smells do most of them want names: sweet and stinking serve our turn for these ideas, though the smell of a rose and violet, both sweet, are distinct ideas. Nor are different tastes better provided with names; the same may be said of colors and sounds. I shall, therefore, set down only such as are most material to our present purpose.

CHAPTER IV.

Of Solidity.

The idea of solidity we receive from the touch; and it arises from the resistance which we find in a body to the entrance of any other body into the place it possesses. This is an idea which we constantly receive from sensation; for whether we move or rest, we always feel something that supports us. I have thought the term 'solidity' more proper to express this idea than 'impenetrability,' which is rather a consequence of solidity, than solidity itself. This idea seems, of all others, most essential to body; and though the senses only notice it in masses of matter,

yet the mind, once having the idea, can trace it in the minutest particle.

This is the idea belonging to body, whereby we conceive it to fill space. The idea of a solid body filling space, is that it excludes all other solid substances, and will hinder two bodies from touching one another unless it remove from between them. All the bodies in the world will never be able to overcome the resistance which a drop of water will make to their approaching each other, till it be removed out of their way. Our idea of solidity is hereby distinguished from pure space, which is incapable of resistance or motion: for a man may conceive of two bodies approaching one another from a distance till they meet, without displacing any solid thing. Hence we have the idea of space.

Solidity also differs from hardness, which is a firm cohesion of the parts of matter, making up masses of a sensible bulk, so that the whole does not easily change its figure. This cohesion of parts gives no more solidity to the hardest than to the softest body. Adamant is not more solid than water. The softest body in the world will as invincibly resist the coming together of any two other bodies, if it be not put out of the way, as the hardest. An experiment was made at Florence which showed the solidity of water: for a golden globe filled with water being put into a press, which was driven by the extreme force of screws, the water made itself way through the pores of the metal before the globe would yield to the compression of the engine. Solidity, then, is the cohesion or continuity of solid, separable, moveable parts, and space is the continuity of unsolid, inseparable, and immoveable parts. Of pure space and solidity there are several (among whom I confess myself one) who persuade themselves, they have clear and distinct ideas; and that they can think on space without any thing in

it: that resists or is protruded by body, as well as on something that fills space, that can be protruded by the impulse of other bodies, or resist their motion; the idea of the distance between the opposite parts of a concave surface, being equally clear without, as with the idea of any solid parts between. If any one ask what solidity is, I send him to his senses to inform him. Let him put a flint or a football between his hands, and then endeavor to join them, and he will know.

CHAPTER V.

Of simple Ideas of divers Senses.

The ideas we get by more than one sense are of space or extension, figure, rest, and motion, for these we can receive both by seeing and feeling.

CHAPTER VI.

Of simple Ideas of Reflection.

The mind having received ideas from without, when it observes its actions about those ideas, takes from thence other ideas. The principal actions of the mind are perception or thinking, and volition. The power of thinking is called the understanding, the power of volition, the will. These two are denominated faculties.

CHAPTER VII.

Of simple Ideas, both of Sensation and Reflection.

There are other simple ideas conveyed into the mind by all the ways of sensation and reflection, viz. pleasure, pain, power, existence, unity. There is scarcely a sensation or a thought which is not able to produce pleasure or pain. By pleasure and pain I mean whatever delights or molests us, whether it arises from the thoughts of our minds, or any thing operating on our bodies.

Locke.

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The wise Author of our being having given us power over several parts of our bodies to move or keep them at rest, and by their motion to move ourselves and contiguous bodies; having also given a power to our minds to choose amongst its ideas, on which it will think; to excite us to these actions of thinking and motion, he has joined to several thoughts and sensations a perception of delight. Without this we should have no reason to prefer one thought or action to another, or motion to rest: in which state man, however furnished with the faculties of understanding and will, would be an idle and unactive creature.

Pain has the same efficacy to set us on work that pleasure has; and pain is often produced by the same objects and ideas that produce pleasure: thus heat, which is agreeable in one degree, by a greater increase of it produces torment; and light itself, increased beyond a due proportion, causes a very painful sensation. Which is wisely so ordered by nature, that when any object disorders the instruments of sensation, we might by pain be warned to withdraw, before the organ be quite unfitted for its proper functions. We may find also another reason why God hath scattered several degrees of pleasure and pain in all the things that environ and affect us; that we, finding the imperfection of earthly happiness, might be led to seek it in the enjoyment of him, 'with whom there is fullness of joy, and at whose right hand are pleasures for evermore.'

Existence and unity are two other ideas that are suggested to the understanding by every object without, and every idea within. Power is another simple idea received from sensation and reflection; by observing that we can move our own bodies at pleasure, and that natural bodies are constantly producing effects in one another.

Succession is another idea, which, though suggested by the senses, is more constantly offered to us by what

passes in our own minds ; for while we are awake or have any thought, we shall find our ideas passing in train.

These, if not all, are at least the most considerable of those simple ideas which we receive from sensation and reflection, and out of which is derived all our other knowledge. Nor will it be so strange to think these few simple ideas sufficient to furnish the materials of all the various knowledge of mankind, if we consider how many words may be made out of 24 letters.

CHAPTER VIII.

Some farther Considerations concerning our simple Ideas.

Whatever is able by affecting our senses to cause a perception in the mind, produces in the understanding a simple idea, which is considered a real positive idea, though the cause of it be a privation in the subject. Thus the ideas of heat and cold, light and darkness, white and black, motion and rest, are equally positive, though some of their causes may be privations. An inquiry into their causes concerns not the idea as it is in the understanding, but the nature of the thing existing without us. A painter or dyer has the ideas of white and black as distinctly in his understanding as a philosopher who has busied himself in considering their natures. If I were inquiring into the natural causes of perception, I should offer this as a reason why a privative cause may produce a positive idea :—that all sensation being produced in us by different degrees and modes of motion in our animal spirits, variously agitated by external objects, the abatement of any former motion must as necessarily produce a new idea as the variation or increase of it. Does not the shadow of a man, which is but the absence of light, cause as clear an idea in the mind as a man himself? Indeed, we have negative names which stand for the absence of positive ideas,

as, 'insipid,' 'silence,' 'nihil,' &c. which words denote the absence of the positive ideas of taste, sound, being, &c. But it will be hard to determine whether we have any positive ideas from a privative cause, till it be determined whether rest be any more a privation than motion. To discover the nature of our ideas, it will be convenient to distinguish them as they are perceptions in our minds, and as they are modifications of matter, causing perceptions in us, that we may not think that they are the exact resemblances of something inherent in the subject. Whatsoever the mind perceives in itself, I call an idea; the power to produce the idea, I call a quality of the subject wherein that power is. Thus a snow-ball producing the ideas of cold, white, round, its powers to produce those ideas I call qualities; and as they are perceptions in the mind, I call them ideas.

Qualities in bodies are first such as are inseparable from the body in what state soever it be. Take a grain of wheat, divide it into two parts, each part has still solidity, extension, figure, and mobility: divide it again and again, till the parts become insensible, they still retain those qualities; for division can never take them away from any body. These, therefore, I call primary qualities.

Such qualities which are but powers to produce various sensations in us by the primary qualities; that is, by the bulk, figure, texture, and motion of their insensible parts, as colors, sounds, tastes, &c. I call secondary qualities. To these might be added a third sort, which are allowed to be barely powers; though they are as much real qualities in the subject, as those which I, for distinction, call secondary qualities: for the power of fire to produce a new color and consistency in wax by its primary qualities, is as much a quality, as the power it has to produce in me a new idea of warmth or burning, which I felt not before, by the same primary qualities, viz. the bulk, texture, and motion of its insensible parts.

Bodies produce ideas in us by impulse : for if external objects be not united to our minds when they produce ideas there, some motion must be thence continued by our nerves to the seat of sensation, there to produce ideas ; and since objects may be perceived at a distance by the sight, it is evident some singly imperceptible bodies must come from them to the eyes, and thereby convey to the brain some motion which produces the ideas which we have of them.

In the same manner ideas of secondary qualities are produced. For as it is manifest that there are bodies so small that our senses cannot discover their bulk, figure, or motion, it is conceivable that the different motions, figure, and bulk of such particles may affect our senses so as to produce the sensations which we have from colors and smells ; it being no more impossible to conceive that the ideas of a blue color and a sweet smell in a violet should be annexed to certain motions of insensible particles of matter with which they have no similitude, than that the idea of pain should be annexed to the motion of a piece of steel dividing our flesh, with which that idea has no resemblance. The same may be said of tastes and sounds, and other sensible qualities, which are but powers in the objects to produce sensations in us.

Whence we draw the observation that the ideas of primary qualities are resemblances of them, but secondary qualities are only a power in bodies to produce those sensations in us. Thus flame is denominated hot and light, snow, white and cold, from the ideas they produce in us. If the same fire at a distance produces warmth, and at a nearer approach causes pain, why should we imagine that the idea of warmth is in the fire, and the idea of pain, produced by the same fire, is not in it ? The particular bulk, number, figure, and motion of the parts of fire and snow are really in them whether any one's senses perceive them or no ; but light, heat, whiteness, or coldness, are no more in them, than sickness or pain is in manna.

The same water, at the same time, may produce the idea of cold by one hand and of heat by the other, but the same water cannot be both hot and cold at the same time. If we imagine warmth as it is in our hands, to be nothing but a certain sort and degree of motion in the minute particles of our nerves, or animal spirits, we may understand how the same water may at the same time produce the sensation of heat in one hand and cold in the other; but figure never produces the idea of square by one hand and round by the other.

The qualities that are in bodies are, 1. bulk, figure, number, situation, and motion or rest of their solid parts. These are in them whether we perceive them or no; and these I call primary qualities. 2. The power that is in any body to produce in us the ideas of color, sound, smell, taste, &c. these are called sensible qualities. 3. The power that is in any body to make a sensible change in the bulk, figure, texture, and motion of another body. Thus the sun has a power to make wax white, and fire to make lead fluid. These are usually called powers.

The first of these may be properly called primary qualities, the other two are only powers which result from the different modifications of those primary qualities.

But the second sort, viz. the power to produce ideas by our senses, are looked on as real qualities, though the third sort are esteemed barely powers. Thus light and heat are thought real qualities existing in the sun, but we look on the whiteness and softness produced in wax, not as qualities in the sun, but as effects produced by powers in it; whereas our perceptions of light and heat are no more in the sun than the changes made in the melted or bleached wax.

The reason why the one are taken for qualities and the other only for powers, is that the ideas we have of colors, sounds, &c. containing nothing of bulk, figure, or motion, we do not think them the effects

of these primary qualities; hence we imagine the ideas to be resemblances of something existing in the objects. But in the operations of bodies changing the qualities one of another, we discover in the qualities produced no resemblance to the cause producing it; for when we see wax or a fair face changed by the sun, we find not these colors in the sun itself: for our senses being able to discover the likeness or unlikeness of sensible qualities in two different external objects, we never fancy any sensible quality produced in a subject to be a quality communicated, but only an effect of bare power, unless we find such a sensible quality in the subject producing it. But our senses not discovering any unlikeness between our ideas and the qualities of objects producing them, we are apt to imagine that our ideas are resemblances of something in the objects, and not the effects of certain powers in their primary qualities.

To conclude; besides the before-mentioned primary qualities, all the rest are but powers, whereby, by immediately operating on our bodies, they produce different ideas in us; or by changing the primary qualities of other bodies, they render them capable of producing ideas in us different from what they before did. The former may be called secondary qualities, immediately perceivable; the latter, secondary qualities, mediately perceivable.

CHAPTER IX.

Of Perception.

Perception is the first faculty exercised about ideas, and is the first idea we have from reflection. It is by some called thinking, though thinking is, in strict propriety, an active operation of the mind; while, in perception, the mind is for the most part passive.

Whatever impressions are made on the body, if they are not taken notice of within, there is no perception. Fire may burn our bodies, but unless the sense of

heat, or idea of pain, be produced in the mind; there is no actual perception. How often may a man observe, that whilst the mind is intently employed, it takes no notice of the impressions of sounding bodies! An impulse is made on the organ, but not reaching the observation of the mind, no perception follows. So that wherever there is sense or perception, there some idea is actually produced, and present to the understanding.

Children before they are born may receive some few ideas from the bodies that environ them, or from the wants and diseases they may suffer. Hunger and warmth are probably the first ideas they have. But these are very far from those innate principles which some contend for; they are the effects of sensation, and differ from other ideas derived from sense only in precedence of time. As some ideas may be introduced into the minds of children previous to their birth, so after they are born those ideas are the earliest imprinted which happen to be the sensible qualities which first occur to them, amongst which light is not the least considerable. The ideas that are most familiar at first being various according to circumstances, the order in which they come into the mind is uncertain, nor is it material to know it.

We are farther to consider concerning perception, that the ideas received by sensation are insensibly altered by the judgment. When we see a round globe, the idea imprinted on our mind is of a flat circle variously shadowed; but having been accustomed to the appearance made by convex bodies, the judgment by habitual custom alters the appearances into their causes: so that from variety of shadow it frames to itself the perception of a convex figure and uniform color; when the idea we receive thence, is only a plane variously colored; as is evident in painting. To which purpose I shall here insert a problem of the learned and worthy Mr. Molineux:—‘Suppose a man born blind, and now adult, and taught by his

touch to distinguish between a cube and a sphere of the same metal, and of the same size, so as to tell, when he felt the one and the other, which is the cube and which the sphere. Suppose then the cube and sphere placed on a table, and the blind man to be made to see: *Quære*, whether by his sight, before he touched them, he could now distinguish, and tell, which is the globe, which the cube? To which the proposer answers, 'Not:' for though he has obtained the experience of how a globe, how a cube affects his touch; yet he has not yet attained the experience, that what affects his touch so or so, must affect his sight so or so; or that a protuberant angle in the cube, that pressed his hand unequally, shall appear to his eye, as it does in the cube.' I agree with this gentleman, and set this down, leaving with my reader to consider how much he may be beholden to experience and acquired notions, when he thinks he has least help from them; and the rather, as this gentleman adds, that having, on the occasion of my book, proposed this to divers very ingenious men, he hardly ever met with one, that at first gave the answer to it, which he thinks true, till, by hearing his reasons, they were convinced.

But this is not usual in any of our ideas but those of sight, which is the most comprehensive of our senses, conveying to the mind the ideas of light and color, which are peculiar to that sense; and also those of space, figure, and motion, the varieties of which so change the appearance of light and color, that we bring ourselves by use to judge of the one by the other. This is done so quickly, that we take that for the perception of our sensation, which is an idea formed by our judgment. Nor need we wonder at this, when we consider how very quick are the actions of the mind; for as thought takes up no space, so its actions seem to require no time. Habits, also, produce actions in us which often escape our observation. How frequently do we cover our eyes with our eyelids

without perceiving that we are in the dark ! and therefore it is not strange that our mind should often change the idea of its sensation into that of its judgment, without taking notice of it.

Perception puts the distinction betwixt the animal kingdom and the inferior parts of nature : for however vegetables may have degrees of motion, and so some have obtained the name of sensitive plants, I suppose it is all bare mechanism, and no otherwise produced than the shortening of a rope by the affusion of water, which is done without sensation. Perception is in all sorts of animals, though the sensations of some are obscure and dull compared with the quickness of others. We may conclude that an oyster has not such quick senses as a man or several other animals : but there is some dull perception whereby they are distinguished from perfect insensibility.

Perception then being the first step and degree towards knowlege, and the inlet of all the materials of it, the fewer senses a man has, and the duller the impressions are that are made by them, and the duller the faculties are that are employed about them, the more remote is he from that knowlege that is to be found in some men.

CHAPTER X.

Of Retention.

The next faculty of the mind in its progress towards knowlege is retention, or the keeping the simple ideas which it receives from sensation or reflection. This is done, 1. by keeping the idea actually in view, which is called contemplation ; 2. by reviving in our minds those ideas which have disappeared ; this is memory, which is as it were the storehouse of our ideas : for the mind not being capable of having many ideas in view at once, it was necessary to lay up those which at another time it might have use of. But this laying up of ideas signifies merely a power which the mind has of reviving perceptions, with the

additional perception that it has had them before : and they are said to be in our memories, when there is only an ability to revive them.

Attention and repetition help to fix ideas in the memory ; but those which make the deepest and most lasting impression are those which are accompanied with pleasure or pain ; the great business of the senses being to make us take notice of what hurts or advantages the body.

Concerning the degrees of lasting wherewith ideas are imprinted on the memory, we may observe that some have been produced by an object affecting the senses once only ; others that have offered themselves more than once have been little heeded ; and some have been set with care and repeated impressions, when through some default the memory is weak. In these cases the ideas leave no more traces than shadows do flying over fields of corn. Thus many ideas, which were first produced in the minds of children, if not repeated in the course of their lives, are quite lost. This may be observed in those who have lost their sight when very young, so that no more notion of colors is left in their minds than in those of people born blind. Memory in some men is very tenacious ; but yet there seems to be a constant decay of our ideas even in minds most retentive ; so that if they be not sometimes renewed, there at last remains nothing to be seen. Thus the ideas, as well as children of our youth, often die before us ; and our minds represent those tombs to which we are approaching, where though the brass and marble remain, yet the inscriptions are effaced by time. How much the constitution of our bodies is concerned in this I shall not here inquire ; though it probably does influence the memory, since we oftentimes find the flames of a fever, in a few days, calcine all those images to dust and confusion, which seemed to be as lasting as if graved in marble.

Those ideas that are oftenest refreshed by a return

of the objects that produced them, fix themselves best in the memory : therefore, those which are of the original qualities of bodies, as, solidity, extension, figure, motion, and rest ;—those which constantly affect our bodies, as heat and cold ;—those which are the affections of all kinds of beings, as existence, duration, and number, are seldom lost while the mind retains any ideas at all.

In memory the mind is oftentimes more than barely passive ; for it sets itself on work in search of some hidden idea : and when ideas lodged in the memory are revived, the mind takes notice of them as of ideas it had known before.

Memory, in an intellectual creature, is necessary in the next degree to perception. Our other faculties are nearly useless without memory, wherein there may be two defects ; 1. that it loses the idea quite, and produces perfect ignorance ; 2. that it retrieves not the idea quick enough to serve the mind's occasions, and this in a great degree is stupidity. In having our ideas ready at hand on all occasions, consists that which we call invention, fancy, and quickness of parts.

There is another defect which belongs to the memory of man in general, compared with superior intelligences, who may have constantly in view the whole of their former actions. The omniscience of God may satisfy us of the possibility of this. It is reported of M. Pascal, that till the decay of his health had impaired his memory, he forgot nothing of what he had done, read, or thought, in any part of his rational age. This seems incredible to those who measure others by themselves ; but it may lead our thoughts towards the perfections of superior spirits ; for this M. Pascal was confined to having ideas in succession ; whereas angels may have constantly set before them, as in a picture, all their knowledge at once, which we may suppose one of those ways in which the knowledge of separate spirits may exceed ours.

This faculty of retaining ideas other animals have

as well as man. Birds learning tunes, and endeavoring to hit the notes right, put it past doubt that they retain ideas, and use them for patterns. For though sound may mechanically cause a certain motion in the brain, and the bird be mechanically driven away by certain noises because this may tend to its preservation, yet that can be no reason why the bird should imitate a sound which can be of no use to its preservation: nor can it be supposed that birds without sense and memory can approach nearer and nearer to a tune played yesterday, which if it be not in the memory is no where, and cannot be a pattern for them to imitate.

CHAPTER XI.

Of Discerning, and other Operations of the Mind.

Another faculty of the mind is that of discerning and distinguishing between its several ideas. Unless the mind had a distinct perception of objects and their qualities, it would be capable of very little knowledge. On this faculty of distinguishing depends the evidence of several propositions which have passed for innate truths.

So far as this faculty is in itself dull, or not rightly made use of, so far our notions are confused and our judgment is misled. If in having our ideas in the memory ready at hand, consists quickness of parts; in being able nicely to distinguish, where there is but the least difference, consists exactness of judgment and clearness of reason. And hence, perhaps, the reason of the observation, that men, who have a great deal of wit and prompt memories, have not always the greatest judgment; for wit lying chiefly in the assemblage of ideas, and putting these together with quickness and variety wherein can be found any resemblance or congruity, thereby to make up pleasant pictures in the fancy; judgment, on the contrary, lies in separating carefully ideas, wherein can be found a difference, thereby to avoid being misled, by simili-

tude, to take one thing for another. This is a way of proceeding quite contrary to metaphor and allusion, wherein lies that entertainment and pleasantry of wit which strikes so lively on the fancy, and is acceptable, because its beauty appears at first sight, and requires no labor of thought; and, indeed, it is an affront to it to go about to examine it by the rules of truth and reason; whereby it appears that it consists in something not conformable to them.

To the well distinguishing of our ideas, it chiefly contributes, that they be clear and determinate. Then there will be no mistake about them, though the senses should convey them differently from the same object. For though a man in a fever should from sugar have a bitter taste, yet the idea of bitter in his mind would be as distinct from the idea of sweet as if he had tasted only gall.

Comparing ideas one with another, in respect of extent, degrees, time, place, &c. is another operation of mind, and is that on which depends our ideas of relation. Brutes have not this faculty, I imagine, in any great degree; they compare ideas no farther than some sensible circumstances annexed to the objects themselves. The power of comparing general ideas, which is only useful for abstract reasonings, we may probably conjecture beasts have not.

Composition is an operation of the mind, whereby it combines simple ideas into complex ones. Under this may be reckoned that of enlarging, a putting together several ideas of the same kind; as, by adding units, we make the idea of a dozen.

In this also, I suppose brutes come far short of men: for though they take in and retain several combinations of simple ideas, as possibly the shape, smell, and voice of his master, make up the complex idea a dog has of him, or are so many marks by which he knows him, yet I do not think they do of themselves make complex ideas. And where we think that they have complex ideas, perhaps they are directed only by

one simple idea : for a bitch will be as fond of young foxes, if they have sucked her, as of her own puppies ; and those animals which have a numerous brood at once appear not to have knowledge of their number ; for if one or two be stolen in their absence, they seem not to miss them.

When children have got ideas fixed in their memories, and have skill for the framing of articulate sounds, they begin to make use of words to signify their ideas to others ; which words they sometimes borrow from others, and sometimes make themselves. If every particular idea should have a distinct name, names must be endless. To prevent this, the mind makes use of abstraction, whereby it forms general ideas from such as it received from particular objects, which it does by considering them as they are in the mind, such appearances, separate from the circumstances of real existence, as time, place, &c. These become general representatives of all of the same kind, and their names applicable to whatever exists conformable to such abstract ideas. Thus the same color being observed to-day in chalk or snow, which the mind yesterday received from milk, it gives it the name of whiteness ; and by that sound signifies the same idea wherever it is to be met with.

If it may be doubted whether beasts compound, it may be asserted that they do not abstract : for we observe no traces of their making use of general signs for universal ideas. It is in this that brutes are discriminated from man : for if they are not bare machines, we cannot deny them to have some reason, but it is only in particular ideas, just as they receive them from the senses ; and they have not, as I think, the faculty to enlarge them by any kind of abstraction.

What seems to be the difference between madmen and idiots is, that madmen put wrong ideas together, and so make wrong propositions, but argue right from them ;—idiots make few or no propositions, and rea-

son scarce at all. A madman, fancying himself a king, with a right inference, requires suitable attendance, respect, &c. acting like a man who reasons right from wrong principles.

These, I think, are the first operations of the mind ; and though they are exercised about all its ideas, yet the instances I have given have been chiefly in simple ideas,—1. because these faculties being exercised at first about simple ideas, we might, by following nature, trace them in their rise, progress, and improvements ; 2. because observing how they operate about simple ideas, which are more clear than complex ones, we may better learn how the mind exercises itself about those which are complex ; 3. because these operations of the mind are another set of ideas, derived from that source which I call reflection, and, therefore, fit to be considered after the simple ideas of sensation.

Thus have I given a short history of the first beginnings of human knowlege, wherein I must appeal to experience and observation whether I am in the right. This is the only way that I can discover in what manner ideas are brought into the understanding. If other men have innate ideas they have reason to enjoy them. I can speak but of what I find in myself. I pretend not to teach but to inquire ; and I confess that external and internal sensation are the only passages that I can find of knowlege to understanding. These are the windows by which light is let into this dark room : for methinks the understanding is not much unlike a closet shut from light, with only some little opening left to let in external visible resemblances of things without : would the pictures coming into such a dark room but stay there, and lie so orderly as to be found on occasion, it would very much resemble the understanding of a man, in reference to all objects of sight and the ideas of them.

CHAPTER XII.

Of complex Ideas.

In the reception of simple ideas the mind is only passive, having no power to frame any one to itself, nor to have any idea which does not wholly consist of them. But about these simple ideas it exerts several acts of its own, whereby, out of them, as the materials and the foundations of the rest, the others are formed. The acts of the mind, wherein it exerts its power over its simple ideas, are chiefly these:—1. it combines several simple ideas into one compound one, and thus complex ideas are made; 2. it brings two ideas, whether simple or compound, together, so as to take a view of them at once, without uniting them, by which it gets its ideas of relation; 3. it separates them from all other ideas that accompany them in their real existence, and thus all its general ideas are made. This shows man's power to be the same in the intellectual and the material world: in both he can neither make nor destroy; all he can do is to unite, to compare, to separate.

As simple ideas exist in several combinations, so the mind has power to consider several of them as one idea; such ideas I call complex, as beauty, gratitude, an army, &c. which, though complicated of various ideas, yet may be considered as one idea, and signified by one name. In this faculty the mind has power to multiply the objects of its thoughts, still confined however to those simple ideas which are the materials of all its compositions. It can have no ideas of any other sensible objects than what come by the senses, nor of operations of thought but what it finds in itself; but it may put together those ideas it has, and make complex ones which it never received so united.

Complex ideas may be reduced under three heads: 1. modes; 2. substances; 3. relations.

Locke.

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First, modes I call such complex ideas as are considered dependent on, or affections of substances, as triangle, gratitude, murder, &c. Of modes there are two sorts: 1. those which are variations or combinations of the same simple idea, as a dozen, a score, I call simple modes; 2. others, compounded of simple ideas of several kinds, as beauty, consisting of a certain composition of color and figure, &c. I call mixed modes.

Ideas of substance are such combinations of simple ideas as represent distinct particular things subsisting by themselves, in which the idea of substance is the chief:—thus a combination of the ideas of a certain sort of figure, with powers of motion, thought, and reasoning, joined to substance, make the idea of man. Of substances there are two sorts of ideas; one of single substances, as a man; the other of several of these put together, as an army, which is as much a single idea as that of a man.

The last sort of complex idea is relation, or comparing one idea with another.

If we will attentively trace the progress of our minds, we shall find that the most abstruse ideas are only such as the understanding frames to itself by repeating and joining ideas that it has from sensation or reflection. This I shall endeavor to show in the ideas we have of space, time, and infinity, and some others that seem most remote from those originals.

CHAPTER XIII.

Of simple Modes; and first, of the simple Modes of Space.

The modifications of a simple idea are as perfectly distinct ideas in the mind as those of the greatest contrariety. The idea of two is as distinct from that of one as blueness from heat.

We get the idea of space by our sight and touch. Space considered barely in length is called distance;

considered in length, breadth, and thickness, it may be called capacity. The term extension is applied to it in what manner soever considered. Each different distance is a different modification of space, and each idea of any different distance or space is a simple mode of this idea. The terms, inch, foot, yard, &c. are so many distinct ideas made up of space. When such measures are familiar to men's thoughts, they may repeat them as often as they will, and enlarge their idea of space as much as they please. This power is that which gives us the idea of immensity.

Another modification of space is taken from the relation of the parts of the termination of extension, or circumscribed space, among themselves. This is called figure. This the touch discovers in sensible bodies which come within our reach; and the eye takes both from bodies and colors whose boundaries are within its view, where observing how the extremities terminate either in straight lines, which meet at discernible angles, or in crooked lines, wherein no angles can be perceived; by considering these as they relate to one another in all parts of the extremities of any body or space, we have the idea called figure, which affords to the mind an indefinite variety.

Another idea coming under this head is place, in which we consider the relation of distance between any thing and any two or more points which are considered as keeping the same distance one with another and so considered as at rest: though, vulgarly speaking, we do not observe the distance from precise points, but from large portions of sensible objects to which we consider the thing placed to bear relation. Thus a company of chess-men standing on the same squares where we left them, are in the same place, though the board may have been removed, because we compared them to the parts of the chess-board. The board itself we say is in the same place, if it be in the same part of the cabin, though the ship has

been sailing. A ship is also said to be in the same place, if it has kept the same distance with the parts of the neighboring land, though the earth has turned round. Thus they may be said to be in the same place in some respects, though their distance from other things being varied, they have changed place in that respect.

This modification of distance called place, being made to design the particular position of things, men determine this place by reference to those adjacent things which serve their present purpose. Thus in the chess-board the place of each man is determined within that chequered piece of wood; but when the chessmen are put into a bag, their place is determined by the part of the room in which they are. So if any one should ask in what place is the story of Nisus and Euryalus, it would be improper to say they were in such a part of the world or in such a library; but the proper answer would be that they are in the middle of the ninth book of Virgil's *Æneis*, where they always have been, though the book has moved a thousand times.

That our idea of place is but a relative position of any thing is plain, when we consider that we can have no idea of the place of the universe, because beyond it we have not the idea of a distinct object to which it can have relation of distance. The idea therefore of place we have, as we have that of space, by our sight and touch, by either of which we receive into our minds the ideas of extension or distance.

Some would persuade us that body and extension are the same. If by body and extension they mean what other people do, viz. by body, something solid and extended, whose parts are separable and moveable; and by extension, the space between the extremities of those solid coherent parts, and which is possessed by them, they confound different ideas one with another. The idea of space is as distinct from

that of solidity as it is from the idea of scarlet. Solidity cannot exist without extension, but they are distinct ideas. Motion cannot be conceived without space, but they are distinct ideas, and so are space and solidity. Solidity is so inseparable from body, that on that depends its filling space, its contact, impulse, and communication of motion. And if spirit is proved to be different from body, because thinking includes not the idea of extension; the same reason will prove that space is not body, because it includes not the idea of solidity.

Body and extension, then, are two distinct ideas: for, 1. extension includes not solidity nor resistance, as body does; 2. the parts of pure space are inseparable really and mentally. To separate actually, is by removing the parts to make two superficies where before was continuity; to separate mentally, is to make in the mind two superficies, where before there was continuity; but neither of these ways of separation is compatible with pure space. A man may consider so much of such a space as is commensurate to a foot, without considering the rest; but a partial consideration is not separating. 3. the parts of pure space are immoveable; motion being a change of distance between any two things; but this cannot be between parts that are inseparable.

Those who contend that space and body are the same, bring this dilemma: either space is something or nothing; if nothing be between two bodies, they must necessarily touch; if it be allowed to be something, they ask whether it be body or spirit? To which I answer, Who told them that there could be nothing but solid beings which could not think, and thinking beings that were not extended? Which is all they mean by body and spirit.

If it be demanded whether space be substance or accident; I know not. And I desire those who lay so great stress on the word substance, to consider,

whether applying it as they do, to God, to spirit, and to body, it be in the same sense. If so, will it not follow that God, spirit, and body differ only as different modifications of that substance; as a tree and a pebble, being in the same sense body, differ only as modifications of matter? If they say that they apply it in three different significations, they would do well to make known those distinct ideas, or to give distinct names to them to prevent the errors that will naturally follow from a term, which is so far from being suspected of having three distinct, that it has scarcely one clear distinct signification. They who considered accidents as real beings, were forced to find the word substance to support them. Had the Indian philosopher thought of the word substance, he need not have been at the trouble to find an elephant to support the world, and a tortoise to support the elephant; and the inquirer might as well take for answer that substance, without knowing what it is, supports the earth, as we take it for good doctrine that substance, without knowing what it is, supports accidents. An intelligent American would hardly take it for satisfactory if he were told that a pillar was a thing supported by a basis, and a basis something that supported a pillar. But were the Latin words 'inhærentia' and 'substantia' put into plain English, 'sticking on' and 'underpropping,' they would better discover to us the very great clearness there is in the doctrine of substance and accidents.

To return to our idea of space. If body be not infinite, could a man placed at the extremity of corporeal being stretch his hand beyond his body? If he could then he would put his arm where there was before space without body; if he could not, what would hinder him, substance or accident, something or nothing? It is as fair then to conclude, that where nothing hinders, a body put in motion may move on, as that where nothing is between two bodies, they

must necessarily touch : for pure space is sufficient to take away the necessity of mutual contact, but not sufficient to stop motion.

Those who assert the impossibility of space without matter, make body infinite, and deny God's power to annihilate any part of matter. No one will deny that God can fix all the bodies in the universe in perfect rest. If during that rest he can annihilate any part of matter, it is evident that the space which was filled by the annihilated body will still remain, and be space without body. Those who dispute for or against a vacuum confess that they have an idea of extension void of solidity, though they deny its existence, or else they dispute about nothing.

But not to go to the remotest bounds of the universe, or to appeal to God's omnipotence to find a vacuum, the motion of bodies within our view seems plainly to evince it. For I desire any one so to divide a solid body as to make it possible for the parts to move within the bounds of that superficies, if there be not left in it a void space as big as the least part into which he has divided it. And let this void space be as little as it will, it destroys the hypothesis of a plenitude.

But the question being, whether the idea of space be the same with the idea of body, it is not necessary to prove the existence of a vacuum, but the idea of it ; which men certainly must have when they dispute about it. The idea of extension joins itself with visible and tangible objects so constantly, that some have made the whole essence of body to consist in extension. But had they reflected on their ideas of tastes and smells, as much as on those of sight and touch, or had they examined their ideas of hunger and thirst, they would have found that they included in them no idea of extension at all. If those ideas which are constantly joined to all others be the essence of things, then unity must be the essence of every thing.

It is plain to me that we have as clear an idea of space distinct from solidity as we have of solidity distinct from motion, or motion from space. But to avoid confusion, it were to be wished, that the name 'extension' were applied only to matter, or the distance of the extremities of particular bodies; and the term 'expansion' to space in general, with or without solid matter possessing it; so as to say, space is expanded, and body extended.

The knowing what our words stand for, would quickly end the dispute: for men who well examine the ideas of their own minds cannot much differ in thinking; however they may perplex themselves with words according to the schools they have been bred up in. Amongst unthinking men who confound ideas with words there must be endless dispute, especially if they be learned bookish men, devoted to some sect, and accustomed to the language of it. But if two thinking men should really have different ideas, I do not see how they could argue one with another. It is not easy for the mind to put off those confused notions it has inadvertently imbibed from custom; it requires assiduity to examine its ideas, till it resolves them into those simple ones out of which they are compounded. Till a man doth this in the primary and original notions of things, he builds on floating and uncertain principles, and will often find himself at a loss.

CHAPTER XIV.

Of Duration, and its simple Modes.

There is another idea of length which we get from the fleeting parts of succession; this we call duration, the simple modes of which are any lengths of it, of which we have distinct ideas, as hours, days, years, &c. time, and eternity.

The answer of a great man to one who asked what time was, *si non rogas, intelligo*, (which amounts to

this, the more I set myself to think of it the less I understand it) might perhaps persuade one that time, which reveals all other things, is itself not to be discovered. But however remote from our comprehension duration, time, and eternity may seem, yet, if we trace them, we shall find them derived from the same common original with the rest of our ideas.

It is evident that there is a train of ideas which constantly succeed one another in the mind as long as we are awake. The distance between any part of that succession we call duration: for while we receive successively several ideas in our minds, we know that we exist, and so we call the continuance of our existence commensurate with the succession of any ideas, the duration of ourselves. When that succession of ideas ceases, our perception of duration ceases with it, which every one experiences in himself when he sleeps soundly; while he sleeps he has no perception of duration, and the moment he leaves off thinking till the moment he begins to think again seems to him to have no distance. So would it be with a waking man, if he could keep one idea in his mind without variation; and we see that any one who fixes his thoughts on one object, so as to take little notice of the succession of ideas, thinks the time shorter than it is. If a man dreams during sleep, then he has a sense of duration: by which it appears that men have the idea of duration by reflecting on the succession of ideas.

A man, having from reflecting on his own thoughts got the idea of duration, can apply that notion to things which exist when he does not think; and, therefore, though he has no perception of the length of duration while he sleeps, yet having observed the revolution of days and nights, he can make allowance for the length of duration while he has been sleeping.

Motion produces in the mind an idea of succession only as it produces a continued train of distinguishable ideas: for a man looking on a body moving perceives

no motion, unless that motion produces a successive train of ideas :—thus in a calm at sea he may look on the sun, the sea, or the ship, and perceive no motion ; but when he perceives one of them to have changed distance with some other body, then a new idea is produced, and he perceives that there has been motion. And this is the reason why slow motions are not perceived, because they cause not a constant train of new ideas to follow one another immediately in our minds. On the contrary, things that move so swift as not to affect the senses distinctly with several distinguishable distances, are also not perceived to move. There seem to be certain bounds to the quickness and slowness of the succession of ideas in our minds, beyond which they can neither delay nor hasten. Let a cannon-ball pass through a room, and take with it a limb of a man, it is clear that it strikes the two sides of the room successively, and that it must touch one part of the body first and another after, but no one could perceive succession either in the pain or sound. Such a part of duration we call an instant, as it takes up the time of only one idea in our minds. Where the motion is so slow as not to supply ideas as fast as the mind is capable of receiving them, and so other ideas coming between them, there the sense of motion is lost, as is evident in the hands of clocks and the shadows of sun dials.

It seems to me that the regular succession of ideas in a waking man is the measure of all other successions, whereof if any one exceeds the pace of our ideas, or is so slow as not to keep pace with them, there the idea of succession is lost. If the ideas of our minds do thus constantly change, it may be said that it is impossible for a man to think long of any one thing. From my own experience I think it is not possible to have one self-same single idea a long time alone in the mind without any variation. All that is in a man's power in this case is to observe the ideas that

take their turns in his understanding, or to call in such as he hath a desire or use of; but I think he cannot hinder the succession of fresh ones. It is not then motion, but the constant train of ideas in our minds; that furnishes us with the idea of duration.

Having got the idea of duration, it is natural for the mind to get some measure of it, whereby to judge of its different lengths. This consideration of duration, as marked by certain measures, we call time.

In measuring extension we apply the standard to the thing to be measured; but we cannot keep by us any measure of duration, which consists in fleeting succession, as we can of certain lengths of extension, as inches, feet, &c. marked on permanent parcels of matter. Nothing then could serve for a measure of time, but what has divided the whole length of its duration into apparently equal portions by constantly repeated periods.

The revolutions of the sun, having been universally observable and supposed equal to one another, have been made use of for the measure of duration. But men, measuring the length of time by the motion of the heavenly bodies, were apt to confound time and motion, or to think that they had a necessary connexion with each other: whereas any constant periodical appearance would have as well distinguished the intervals of time. For supposing the sun had been lighted up at the same distance of time that it now every day comes to the same meridian, and then gone out again twelve hours afterward, would not such regular appearance serve to measure the distance of duration as well without as with motion.

The freezing of water or the blowing of plants would serve to reckon years by, as well as the motion of the sun. Some people in America count their years by the migration of certain birds. Any idea returning constantly at equidistant periods would not fail to measure the distances of time. A blind man, who

distinguishes his years by the heat of summer or the cold of winter, would have a better measure of time than the Romans had before the reformation of their calendar, or many other people, whose years, notwithstanding the motion of the sun, are very irregular.

But it will be said, without a regular motion, such as of the sun, how could it be known that such periods were equal? I answer, the equality of any other returning appearances might be known, as that of days, by the train of ideas that had passed in men's minds, by which train of ideas the natural days were discovered to be unequal, and the artificial were guessed to be equal. Inequality has been discovered in the diurnal revolutions of the sun, and may be also in the annual; but by their presumed equality they serve to reckon time by, though not to measure the parts of duration exactly. We must distinguish between duration and the measures we use to judge of its length. Duration proceeds in one uniform course; but none of its measures can be known to do so. The motion of the sun has been found in its several parts unequal; and it would be difficult for any one to satisfy himself that two successive swings of a pendulum are equal. Since then no two portions of succession can be brought together, it is impossible to know their equality. Our only measure of time is from successive appearances at seeming equidistant periods, of which equality we have no other measure but the train of our ideas, with the concurrence of other probable reasons.

It seems strange, that whilst men measured time by motion, time yet should be defined as the measure of motion. To measure motion, space is as necessary to be considered as time; and the bulk of the thing moved is also to be taken into the computation. Motion conduces to the measuring of duration only as it brings about the return of certain ideas in seeming equidis-

tant periods. If the motion of the sun were variable as the wind, or eccentric as a comet, it would not at all help us to measure time.

Minutes, hours, and days are no more necessary to time, than inches and feet are to extension : for though, by the constant use of them, we have fixed the ideas of such lengths of duration in our minds, yet there may be parts of the universe where they no more use such measures than in Japan they use our inches, feet, or miles ; but something analogous to them there must be. But the different measures of time do not alter the notion of duration any more than the different standards of a foot and a cubit alter the notion of extension to those who make use of those different measures.

The mind having once got such a measure of time as the revolution of the sun, can apply it to duration wherein that measure did not exist ; for the idea of duration equal to an annual revolution of the sun is as applicable in our thoughts to duration where no sun or motion was, as the idea of a foot or yard, taken from bodies here, can be applied in our thoughts to distances beyond the confines of the world. For, supposing it to be as many miles or millions of miles from this place to the remotest part of the universe, as it is years from this time to the beginning of the world, we can in our thoughts apply this measure of a year to duration before the creation, as we can the measure of a mile to space beyond the utmost bodies. If it be objected, that I have begged what I should not, viz. that the world is neither infinite nor eternal ; I answer, that I have the liberty to suppose it as well as any one hath the liberty to suppose the contrary ; and I doubt not but that any one may easily conceive in his mind the beginning of motion, though not of duration ; so also in his thoughts he may set limits to body, but not to space, where no body is.

By the same means therefore that we come to have

the idea of time, we have also the idea of eternity; viz. having got the idea of succession and duration, and of certain lengths of duration, we can in our thoughts add such lengths to one another *in infinitum*, and apply the length of the annual motion of the sun to duration supposed before the sun had its being; which is no more difficult than to apply the notion I have of the moving of the shadow one hour on the sun-dial to the duration of the burning of a candle last night; and it is as impossible for the duration of that flame for an hour last night to co-exist with any motion that now is or ever shall be, as for any part of duration before the beginning of the world to co-exist with the motion of the sun now.

The motion of an hour, day, or year, being only the idea I have of certain periodical motions not co-existent, I can apply it to duration antecedent to all motion, as well as to any thing that is a minute or a day antecedent to the motion, that at this very moment the sun is in; the measuring of any duration by some motion depending not at all on the real co-existence of that thing to that motion, but the having a clear idea of the length of some known motion, and applying that to the duration of the thing I would measure.

Hence we see, that some men imagine the duration of the world to have been 5639 years, and others a great deal more; as the Egyptians in the time of Alexander counted 23,000 years, and the Chinese now count upwards of 3,269,000, which duration, though I should not believe it to be true, I can easily imagine, and can as truly understand as I can that Methusalem's life was longer than Enoch's. Whereby it appears that to the measuring the duration of any thing by time, it is not requisite that that thing should be co-existent to the motion we measure it by, but that we have the idea of the length of any periodical appearances, which we can in our minds apply to duration.

For as in the history of the creation delivered by Moses, I can imagine that light existed three days before the sun was, or had motion ; so I can have the idea of chaos being created before there was light, a minute, a day, or 1000 years. For if I can consider duration equal to one minute before the being or motion of any body, I can add minutes, hours, or years *ad infinitum*, and suppose a duration exceeding as many such periods as I can reckon, which I think is the notion we have of eternity.

And thus I think it plain that, from reflection and sensation, we get the ideas of duration, and the measures of it. 1. By observing the train of ideas in our minds, we come by the idea of succession. 2. By observing a distance in the parts of this succession, we get the idea of duration. 3. By observing certain appearances at certain periods, we get the ideas of certain measures of duration, as minutes, hours, days, &c. 4. By repeating those measures in our minds, we can imagine duration where nothing exists, and thus we imagine to-morrow, next year, or seven years hence. 5. By being able to repeat ideas of any length of time, as of a minute or year, as often as we will in our own thoughts, we come by the idea of eternity. 6. By considering any part of duration as set out by periodical measures, we come by the idea of time in general.

CHAPTER XV.

Of Duration and Expansion, considered together.

Though we have dwelt long on the consideration of space and duration, yet as they have something very abstruse and peculiar in their nature, we may have a more distinct conception of them by taking a view of them together. Space I call expansion, to distinguish it from extension, which by some is used to express distance in the solid parts of matter, and so intimates

the idea of time, we have also the idea of eternity; viz. having got the idea of succession and duration, and of certain lengths of duration, we can in our thoughts add such lengths to one another *in infinitum*, and apply the length of the annual motion of the sun to duration supposed before the sun had its being; which is no more difficult than to apply the notion I have of the moving of the shadow one hour on the sun-dial to the duration of the burning of a candle last night; and it is as impossible for the duration of that flame for an hour last night to co-exist with any motion that now is or ever shall be, as for any part of duration before the beginning of the world to co-exist with the motion of the sun now.

The motion of an hour, day, or year, being only the idea I have of certain periodical motions not co-existent, I can apply it to duration antecedent to all motion, as well as to any thing that is a minute or a day antecedent to the motion, that at this very moment the sun is in; the measuring of any duration by some motion depending not at all on the real co-existence of that thing to that motion, but the having a clear idea of the length of some known motion, and applying that to the duration of the thing I would measure.

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Of Duration and Expansion, considered together.

Though we have dwelt long on the consideration of space and duration, yet as they have something very abstruse and peculiar in their nature, we may have a more distinct notion of them by taking a view of all expansion, to distinguish it from the extension of matter, and so intimate

the idea of time, we have also the idea of eternity; viz. having got the idea of succession and duration, and of certain lengths of duration, we can in our thoughts add such lengths to one another *in infinitum*, and apply the length of the annual motion of the sun to duration supposed before the sun had its being; which is no more difficult than to apply the notion I have of the moving of the shadow one hour on the sun-dial to the duration of the burning of a candle last night; and it is as impossible for the duration of that flame for an hour last night to co-exist with any motion that now is or ever shall be, as for any part of duration before the beginning of the world to co-exist with the motion of the sun now.

The motion of an hour, day, or year, being only the idea I have of certain periodical motions not co-existent, I can apply it to duration antecedent to all motion, as well as to any thing that is a minute or a day antecedent to the motion, that at this very moment the sun is in; the measuring of any duration by some motion depending not at all on the real co-existence of that thing to that motion, but the having a clear idea of the length of some known motion, and applying that to the duration of the thing I would measure.

Hence we see, that some men imagine the duration of the world to have been 5639 years, and others a great deal more; as the Egyptians in the time of Alexander counted 23,000 years, and the Chinese now count upwards of 3,269,000, which duration, though I should not believe it to be true, I can easily imagine, and can as truly understand as I can that Methusalem's life was longer than Enoch's. Whereby it appears that to the measuring the duration of any thing by time, it is not requisite that that thing should be co-existent to the motion we measure it by, but that we have the idea of the length of any periodical appearances, which we can in our minds apply to duration.

For as in the history of the creation delivered by Moses, I can imagine that light existed three days before the sun was, or had motion ; so I can have the idea of chaos being created before there was light, a minute, a day, or 1000 years. For if I can consider duration equal to one minute before the being or motion of any body, I can add minutes, hours, or years *ad infinitum*, and suppose a duration exceeding as many such periods as I can reckon, which I think is the notion we have of eternity.

And thus I think it plain that, from reflection and sensation, we get the ideas of duration, and the measures of it. 1. By observing the train of ideas in our minds, we come by the idea of succession. 2. By observing a distance in the parts of this succession, we get the idea of duration. 3. By observing certain appearances at certain periods, we get the ideas of certain measures of duration, as minutes, hours, days, &c. 4. By repeating those measures in our minds, we can imagine duration where nothing exists, and thus we imagine to-morrow, next year, or seven years hence. 5. By being able to repeat ideas of any length of time, as of a minute or year, as often as we will in our own thoughts, we come by the idea of eternity. 6. By considering any part of duration as set out by periodical measures, we come by the idea of time in general.

CHAPTER XV.

Of Duration and Expansion, considered together.

Though we have dwelt long on the consideration of space and duration, yet as they have something very abstruse and peculiar in their nature, we may have a more distinct conception of them by taking a view of them together. Space I call expansion, to distinguish it from extension, which by some is used to express distance in the solid parts of matter, and so intimates

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Of Duration and Expansion, considered together.

Though we have dwelt long on the consideration of space and duration, yet as they have something very abstruse and peculiar in their nature, we may have a more distinct conception of them by taking a view of them together. Space I call expansion, to distinguish it from extension, which by some is used to express distance in the solid parts of matter, and so intimates

the idea of body. I also prefer the word expansion to space, because space is often applied to the distance of fleeting successive parts. In both these, viz. expansion and duration, the mind has the common idea of continued lengths capable of greater or less quantities.

The mind having got the idea of the length of any part of expansion, can repeat that idea, and enlarge its idea of length, till it amounts to the distance of the remotest star; and by such progression it can pass beyond all those lengths, and find nothing to stop its going on. We can easily in our thoughts come to the end of solid extension; but when the mind is there, it finds nothing to hinder its progress into endless expansion. Nor let any one say that beyond body there is nothing at all, unless he will confine God within the limits of matter. Solomon hath said, 'The heaven of heavens cannot contain thee;' and he, I think, much magnifies the capacity of his understanding, who persuades himself that he can extend his thoughts farther than God exists.

Just so it is in duration. The mind, having got the idea of any length of duration, may enlarge it beyond the existence of all corporeal beings; but though we may make duration boundless, we cannot extend it beyond all being. God fills eternity; and why should any one doubt that he likewise fills immensity? It is ascribing too much to matter, to say, where there is no body, there is nothing.

Hence we may learn why every one without hesitation ascribes infinity to duration, but many admit with more reserve the infinity of space. The reason seems to be, that duration and extension being names of affections of other beings, we conceive in God infinite duration; but not attributing to him extension, we are apter to doubt of the existence of expansion without matter, of which alone we suppose it an attribute. And therefore when men pursue their thoughts

of space, they stop at the confines of body ; or if they carry them farther, they regard space as if it were nothing, because there is no body existing in it : but duration is never supposed void of some other real existence. . And if names may direct our thoughts to the original of ideas, one may think, by the name duration, that the continuation of existence, with a kind of resistance to destructive force, and the continuation of solidity, were thought to have some analogy, and gave occasion to words so near of kin as *durare* and *durum esse*. Be that as it will, whoever pursues his own thoughts, will sometimes find them launch out beyond the extent of body into the infinity of space.

Time is to duration as place to expansion : they are so much of eternity and immensity as is distinguished from the rest, as it were, by land-marks. Rightly considered, they are nothing but ideas of determinate distances from certain known points : for duration and space being in themselves boundless and uniform, the order and position of things, without such settled points, would be lost in them.

Time and place, taken for determinate portions of infinite space and duration, have each of them a two-fold acceptation.

1. Time is so much of infinite duration as is co-existent with the motions of the great bodies of the universe, and in this sense time begins and ends with the sensible world. Place likewise is that portion of infinite space which is possessed by the material world. Within these are measured and determined the time or duration, and the extension and place, of all corporeal beings.

2. Sometimes the word ‘time’ is applied to such other portions of infinite duration which we suppose equal to certain lengths of measured time. For if we should suppose the creation of angels was at the beginning of the Julian period, we should be understood, if we said, ‘It is a longer time since the creation of

angels than the creation of the world by 764 years.' We should thus mark out so much of that infinite duration as we supposed equal to 764 revolutions of the sun. And thus we sometimes speak of place beyond the confines of the world, when we consider so much of that space as is capable of receiving a body of any assigned dimensions.

'Where' and 'when' are questions belonging to all finite beings, and are measured from some known parts, or certain epochs. Without some such fixed periods or parts, the order of things would be lost to our understandings in the boundless ocean of duration and expansion, which in their full extent belong only to the Deity. And therefore we find our thoughts at a loss when we would consider them abstractedly, or as attributed to the Creator. But when applied to finite beings, the extension of any body is so much of space as that body takes up; and place is the position of any body considered at a certain distance from another. As the idea of the duration of any thing is the idea of that portion of infinite duration which passes during its existence, so the time when the thing existed is the idea of that space of duration, which passed between some known period, and the being of that thing.

Space and duration have a great conformity in this, viz. that though they are reckoned among our simple ideas, yet it is the nature of both of them to consist of parts; but their parts being all of the same kind, hinder them not from having a place among our simple ideas. The mind cannot, as in number, come to an indivisible unit or idea, and conceive space without parts; it uses therefore the common measures of inches, feet, hours, days, as simple ideas of which larger ones are compounded. Every part of duration is duration, and every part of extension is extension, both capable of addition or division *in infinitum*. But the least portions of either of them, of which we have clear

and distinct ideas, may, perhaps, be fittest to be considered by us as the simple ideas of that kind out of which our complex modes of space, extension, and duration are made up.

Expansion and duration also agree, in that their parts are not separable, no, not even in thought. But there is this difference between them, that the ideas of length which we have of expansion are turned every way, but duration is but as it were the length of one straight line, and is the common measure of all existence. What spirits have to do with space we know not; but it is as hard to have an idea of any real being, with a perfect negation of all manner of expansion, as it is to have the idea of any real existence with a perfect negation of all manner of duration.

Duration is the idea we have of perishing distance, of which no two parts exist together; as expansion is the idea of distance, all whose parts exist together. And though we cannot conceive that any being possesses at once more than the present moment of duration, yet we can conceive the duration of the Almighty far different from that of man; because man comprehends not in his knowledge and power all past and future things; but God's infinite duration being accompanied with infinite knowledge, the past and the future are no more distant from his sight than the present. To conclude, expansion and duration do mutually embrace and comprehend each other, every part of space being in every part of duration, and every part of duration in every part of expansion.

CHAPTER XVI.

Of Number.

Amongst all the ideas we have, as there is none suggested to the mind by more ways, so there is none

more simple than that of unity : every thought of our mind brings this idea with it, for number applies itself to every thing that either doth exist or can be imagined. By repeating this idea, we come by the complex ideas of the modes of it ; thus by putting twelve units together we have the complex idea of a dozen.

The simple modes of number are of all other the most distinct, two being as distinct from one as two hundred. This is not so in other simple modes ; for who will undertake to find a difference between the white of this paper and that of the next degree to it ?

The distinctness of each mode of number makes me think that demonstrations in numbers, if not more exact than in extension, are more determinate in their application, because the ideas of numbers are more distinguishable than in extension. Number 91 is as distinguishable from 90, to which it is the next excess, as it is from 9000 ; but in extension of lines, which appear of an equal length, one may be longer than the other by innumerable parts ; nor can any one assign an angle which shall be the next biggest to a right one.

By repeating the idea of a unit we make a collective idea, marked by the name two ; and whoever can proceed, still adding one to the last collective idea, and give a name to it, may have ideas for collections of units as far as he has names for numbers, and memory to retain them. So that he who can add one to one and so to two, and go on taking distinct names to every progression, and again by subtracting, can retreat and lessen them, is capable of all the ideas of numbers within the compass of his language, though not of more ; for without names and marks we cannot use numbers in reckoning, which being put together without a name, will be hardly kept from being a heap of confusion. This I think to be the reason why some Americans could not count to 1000, although

they could reckon very well to 20; because their language had no word to stand for 1000, and in order to express a great multitude, they would show the hairs of their head. The Tououpinambos had no names for numbers above 5; any number above that they made out by showing their fingers, and those of others who were present; and we ourselves might number farther than we do, would we but find out fit denominations. To show how much distinct names conduce to well reckoning, let us set the following figures as the marks of one number:

Nonillions.	Otilions.	Septillions.	Sextillions.	Quintillions.
623,137.	857,324.	162,486.	345,896.	437,916.
Quatrillions.	Trillions.	Billions.	Millions.	Units.
432,147.	248,106.	325,421.	261,734.	368,149.

The ordinary way of naming this number is the repeating of millions, of millions, of millions, &c. &c. in which way it will be hard to have any distinguishing notion of this number; but by giving every six figures a denomination, a great many more may be easily counted, and more plainly signified to others.

Thus children, either for want of names, or not having the faculty to collect scattered ideas into complex ones, do not begin to number very early, and they have clear conceptions of several other things before they can count 20. And some, through default of memory to retain the combinations, are not able all their life-time to reckon any moderate series of numbers: for to reckon right it is required—1. that the mind distinguishes two ideas, which differ only by the addition or subtraction of a unit; 2. that it retain in memory the names of the several combinations in exact order, without which there will remain only the confused idea of multitude, but the ideas necessary to distinct numeration will not be attained.

This farther is observable in number, that the mind makes use of it in measuring all things, and our idea of

infinity seems to be nothing but the infinity of number. For let a man collect into one sum as great a number as he pleases, he still has the power of adding to it; and this capacity of endless addition is that which gives us the clearest idea of infinity.

CHAPTER XVII.

Of Infinity.

He that would know what the idea of infinity is, must consider to what infinity is attributed, and how the mind comes to frame the idea.

Finite and infinite seem to be looked on as modes of quantity, and to be attributed primarily to whatever is capable of increase or diminution; such are the ideas of space, duration, and number. We cannot but be assured that the great God is infinite; but when we apply to him our idea of infinite, we do it primarily, in respect of his duration and ubiquity, but more figuratively to his power, wisdom, and goodness, which are properly inexhaustible and incomprehensible: for when we call them infinite, we intimate that the number of their acts and objects can never be supposed so great, that these attributes will not always exceed them. I do not pretend to say how these attributes are in God, but these are our ideas of their infinity.

Finite and infinite being modifications of expansion and duration, it is next to be considered how the mind comes by them. The portions of extension that affect our senses, and the ordinary measures of duration, as hours, days, and years, carry with them the idea of finite. The difficulty is how we come by the idea of infinity.

Every one who has an idea of any length of space can repeat that idea without ever coming to an end of his additions; for how often soever he increases it, he finds that the power of enlarging this idea of space still remains the same; hence he has the idea of infi-

nite space. It is a different consideration to examine whether the mind has the idea of such boundless space actually existing, since our ideas are not proof of existence; but I may say that we are apt to think that space itself is actually boundless, to which imagination the idea of space itself naturally leads us: for it being considered either as the extension of body, or as existing by itself, without solid matter taking it up, it is impossible that the mind should be able to suppose any end to it. So far as body reaches, no one can doubt of extension; and when we are come to the extremity of body, what is there that can satisfy the mind that it is at the end of space, when it is satisfied that body itself can move into it? For if it be impossible for matter to move but into empty space, the same possibility of a body's moving into space beyond the bounds of body, as well as into space interspersed among bodies, will always remain clear, the idea of space, whether within or beyond the confines of body, being exactly the same. So that wherever the mind places itself either amongst or remote from all bodies, it can, in this uniform idea of space, no where find any bounds, and must necessarily conclude it to be infinite.

As by repeating any idea of space we get the idea of immensity, so by repeating any lengths of duration we come by the idea of eternity: for we can no more come to the end of such repeated ideas than we can come to the end of number. But it is another question to know whether there were any real Being whose duration has been eternal. Having spoken of this in another place, I shall proceed to some other considerations of our idea of infinity.

If our idea of infinity be got by repeating our own ideas, it may be demanded why we do not attribute infinity to other ideas as well as those of space and duration? yet nobody ever thinks of infinite sweetness or infinite whiteness. I answer, all the ideas

that are capable of increase by addition of equal or less parts afford us the idea of infinity : to the largest idea of extension or duration that I at present have, the addition of any part makes an increase ; but to the most perfect idea I have of whiteness, if I add another less or equal, (and a greater I cannot have) it makes no increase, and therefore the different ideas of whiteness, &c. are called degrees. If you take the idea of white which a parcel of snow yielded yesterday, and another idea of white from snow seen to-day, and put them together, your idea of whiteness is not at all increased. And if we add a less degree of whiteness to a greater, we diminish it.

Though our idea of infinity arise from the contemplation of quantity and the endless increase the mind is able to make in quantity, yet we cause great confusion when we join infinity to any supposed idea of quantity, and so discourse about an infinite space or an infinite duration : for our idea of infinity being a growing idea, and our idea of a quantity being terminated in that idea, to join infinity to it is to adjust a standing measure to a growing bulk. There is a distinction therefore between the idea of the infinity of space and the idea of a space infinite. The first is an endless progression, but the latter supposes the mind to have passed over those repeated ideas of space which endless repetition can never totally represent ; which is a plain contradiction.

This will be plainer if we consider it in numbers. The infinity of numbers easily appears to any one that reflects ; but there is nothing more evident than the absurdity of the actual idea of an infinite number. Whatever ideas we have of any space, duration, or number, they are finite : but when we suppose an inexhaustible remainder from which we remove all bounds, we have our idea of infinity ; which seems clear when we consider it but the negation of an end ; yet when we would frame an idea of an in-

finite space or duration, that idea is obscure, because made up of two inconsistent parts: therefore we are so easily confounded when we come to argue about infinite space or duration.

Of all other ideas it is number which furnishes us with the clearest idea of infinity. For even in space and duration, when the mind pursues the idea of infinity, it makes use of the repetition of numbers; and when it has added together as many millions as it pleases of known lengths of space and duration, the clearest idea it can get of infinity is the incomprehensible remainder of endless addible numbers.

It will give us a little farther light into the idea we have of infinity; if we consider that number is not generally thought infinite; whereas duration and extension are. In number we are, as it were, at one end, for there being nothing less than a unit, there we stop; but in addition, we can set no bounds. So it is like a line, one end terminating with us, and the other extended beyond all conception. But in duration we consider the line infinitely extended both ways, and which is nothing else but turning this infinity of numbers both ways, *a parte ante*, and *a parte post*. For when we consider eternity *a parte ante*, we begin from the present time, repeating ideas of years and ages with all the infinity of number; and when we consider eternity *a parte post*, we begin from ourselves, and reckon by periods to come, extending the line of number as before; and these being put together are the infinite duration we call eternity. The same happens in space, wherein, conceiving ourselves in the centre, we on all sides pursue the interminable lines of number; and having no more reason to set bounds to those repeated ideas than we have to set bounds to number, we have the idea of immensity. And since our thoughts can never arrive at the utmost divisibility of matter, there is an infinity in that which has also the infinity of number; but while in

the former considerations we use addition, this is like the division of a unit into fractions, wherein the mind can proceed in *infinitum*, by the addition, still, of new numbers; though in the one we cannot have the idea of a space infinitely great, nor in the other of a body infinitely little; our idea of infinity being in a boundless progression.

Though no one can be so absurd as to say he has a positive idea of an infinite number, yet there are those who imagine that they have positive ideas of infinite space and duration. But to ask such a one whether he could add to his idea, would show him his mistake. We can have no idea of any space or duration which is not commensurate to repeated numbers of the common measures whereby we judge of the greatness of these quantities; and, therefore, since an idea of infinite space or duration must be made up of infinite parts, it can have no other infinity than that of number still capable of farther addition.

It is a pleasant argument, whereby the idea of infinite is proved to be positive by the negation of an end, which, being negative, the negation of it is positive. But end is not negative. He that perceives that the end of his pen is black or white, will be apt to think that end to be something more than a negation: and when applied to duration, the end is but the last moment of it. But if they will have the end to be a negation, they cannot conceive the beginning to be also a bare negation; and, therefore, their idea of eternal, *a parte ante*, must be a negative idea.

The idea of infinite has something of positive in the things that we apply to it. When we think of infinite space or duration, we make some large idea, as of millions of miles or ages, and all that we amass together is positive. But of what remains we have no more a positive notion than the mariner has of the depth of the sea when his sounding line reaches not the bottom. He knows the depth to be so many

fathoms ; but how much more, he hath no distinct notion. So much as the mind comprehends of any space it has a distinct idea of ; but in endeavoring to make it infinite, the idea is imperfect and incomplete.

1. The idea of so much is positive and clear. 2. The idea of greater is also clear, though it is but a comparative idea. 3. The idea of so much greater as cannot be comprehended is plain negative, and not positive. For to say a man can have a positive idea of any quantity without knowing how great it is, is as reasonable as to say that he has a clear idea of the number of the sands on the shore who knows not how many they be, but only that they are more than twenty. So that what lies beyond our positive idea towards infinity, has the confusion of a negative idea ; and that is far from a positive idea, whereof the greatest part is left out under the indeterminate intimation of being still greater. For to say, that having in any quantity gone so far, yet you are not at the end, is to say that that quantity is greater, and a total negation of an end is but carrying the idea of greater in all the progressions of your thoughts, and adding the idea of greater to all the ideas you have of quantity. Whether such an idea as that be positive, I leave any one to consider.

I ask those who say they have a positive idea of eternity, whether their idea of duration includes succession or not. If not, they should show the difference of duration as applied to an eternal and to a finite being. If, to avoid succession in eternal existence, they recur to the *punctum stans* of the schools, they will not thereby help us to a clearer idea of infinite duration. Besides, that *punctum stans* being not *quantum*, finite or infinite cannot belong to it. But if we cannot separate succession from duration, our idea of eternity can be only of an infinite succession of moments, and I leave any one to consider whether he has a positive idea of an actual infinite

number. I think it unavoidable for every rational creature to have the notion of an eternal wise Being, who had no beginning. Such an idea of infinite duration I am sure I have; but this negation of a beginning gives me not a positive idea of infinity.

He that thinks he has a positive idea of infinite space will find that he has no more idea of the greatest than he has of the least space. All our positive ideas of any quantity, whether great or little, have bounds; though our comparative idea, whereby we can add to the one and take from the other, has no bounds. A pestle and mortar will as soon bring any particle of matter to indivisibility, as the acutest thought of the mathematician. He that thinks on a cube of an inch diameter has a clear idea of it, and so can frame one of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, and so on, till he has the idea of something very little: but he reaches not the idea of the incomprehensible littleness which division can produce.

Some persons persuade themselves that they have a positive idea of eternity, but that they have not an idea of infinite space: the reason of which I suppose to be, that finding it necessary to admit some eternal Being, they consider the real existence of that Being, as taking up their idea of eternity; but not finding it necessary that body should be infinite, they conclude they have no idea of infinite space, because they have no idea of infinite matter. But the existence of matter is no more necessary to the existence of space, than the existence of the sun is necessary to duration, though duration be measured by it. It is as easy to have the idea of space empty of body as to think of the capacity of a bushel without corn. And why should we think our idea of space requires the existence of matter, when we have as clear an idea of infinite duration to come as we have of infinite duration past? though nobody conceives that any thing has existed in that future duration. Those philoso-

pliers who are of opinion that infinite space is possessed by God's omnipresence, as well as infinite duration by his eternal existence, must be allowed to have as clear an idea of infinite space as of infinite duration, but they cannot have a positive idea of infinity in either case. For whatever positive idea a man has of any quantity, he may repeat it; so that if a man had a positive idea either of infinite duration or space, he could add two infinities together, an absurdity too gross to be confuted. I am apt to think that the difficulties, which involve all discourses concerning infinity, are the marks of a defect in our ideas of infinity and the disproportion the nature of it has to our narrow capacities. For while men talk of infinite space or duration, as if they had as positive ideas of them as they have of a yard or an hour, it is no wonder if the incomprehensible nature of the thing they reason about leads them into perplexities and contradictions.

I pretend not to treat of duration, space, number, and infinity, in their full latitude; it suffices to show that the mind receives them from sensation and reflection, and how the idea of infinity, remote as it may seem from any object of sense or operation of the mind, has, as all our other ideas, its original there.

CHAPTER XVIII.

Of other simple Modes.

Though the instances I have given in the foregoing chapters of simple modes of the simple ideas of sensation might suffice to show how the mind comes by them, yet for method's sake I shall briefly give a few more.

To slide, roll, tumble, walk, &c. are words which present to the mind distinct ideas, which are but the different modifications of motion. Modes of motion answer those of extension. Swift and slow are com-

plex ideas comprehending time and space with motion.

Every articulate word is a different modification of sound, by which the mind may be furnished with distinct ideas to an indefinite number. Sounds also are modified by notes of different length put together, making the complex idea of a tune, which a musician may have in his mind by silently reflecting on the ideas of those sounds.

The modes of colors are also various, as the different degrees or shades of the same color; but since we seldom make assemblages of colors, but figure has its part in them, those which are most taken notice of are mixed modes made up of color and figure, as 'beauty,' 'rainbow,' &c.

All compounded tastes and smells are modes made up of the simple ideas of those senses; but being such as we have no names for, must be left without enumeration.

In general, it may be observed, that those simple modes which are but different degrees of the same simple idea, though distinct in themselves, have no distinct names, where the difference is small between them; either because men wanted measures nicely to distinguish them, or because, when distinguished, the knowledge would not be of general use. The reason of which I suppose has been this;—the great concernment of men being with men one amongst another, the knowledge of men, and their actions, and ways of signifying them, was most necessary; therefore ideas of actions were nicely modified, and our complex ideas of them received names, in order that we might record and discourse of them without circumlocution.

That this is so, we may observe in many arts, where, for the sake of a short way to express their thoughts, those concerned in them have invented words for complex ideas, which are unintelligible to most men of the same language.

CHAPTER XIX.

Of the Modes of Thinking.

When the mind contemplates its own actions, thinking is the first that occurs. In it the mind observes various modifications, from which it receives distinct ideas. The perception accompanying an impression made on the body by an external object, being distinct from all other modifications of thinking, is called sensation. The same idea recurring without an impression on the external sensory by the same object, is called remembrance. If the mind recover the idea by laborious search, it is recollection : if it be held long under consideration, it is contemplation. When ideas float in the mind without reflection it is what we call by the French word, *reverie* ; when ideas are taken notice of and registered in the memory, it is attention ; when the mind with great earnestness fixes its view on any idea, it is that we call intention or study. Sleep without dreaming is rest from all these : and dreaming is having ideas not suggested by external objects, nor under the conduct of the understanding. What we call ecstasy may be dreaming with the eyes open.

These are some few instances of the various modes of thinking, which the mind may observe in itself. I pretend not to enumerate them all : it suffices to have shown by some examples of what sort these ideas are, and how the mind comes by them ; especially since I shall have occasion hereafter to treat more at large of reasoning, judging, volition, and knowlege.

But it may not be an unpardonable digression if we reflect here on the different states of the mind in thinking, which the instances before-mentioned naturally suggest. That there are some ideas always present to the mind, experience convinces us. Sometimes the mind fixes itself so earnestly on the contem-

plation of some objects, that it shuts out all other thoughts, and takes no notice of the ordinary impressions made then on the senses : at other times it barely observes the train of ideas ; and at others, lets them pass quite unregarded, as shadows that make no impression. The difference between earnest study and very near minding nothing at all every one has experienced in himself. Trace it a little farther, and you find the mind in sleep out of the reach of the motions made on the organs of sense. But in this retirement of the mind from the senses, it often retains an incoherent manner of thinking which we call dreaming : and last of all, sound sleep quite closes the scene. Since all this is so evident in constant experience, is it not probable that thinking is the action, and not the essence of the soul ? since the operation of agents will admit of intention and remission ; but the essences of things are not capable of any such variation.

CHAPTER XX.

Of Modes of Pleasure and Pain.

Of the simple ideas which we receive from sensation and reflection, pain and pleasure are two very considerable ones. The thoughts and perceptions of the mind, as also the sensations of the body, exist sometimes simply, unaccompanied either with pleasure or pain. These, like other simple ideas, cannot be described nor their names defined ; the way of knowing them is only by experience.

Things are good and evil only in reference to pleasure or pain. That which causes pleasure or diminishes pain we call good ; and we name that evil which produces pain or diminishes pleasure. By pleasure and pain I mean of body and mind, as they are commonly distinguished ; though they be only different constitutions of the mind, occasioned by bodily sensations, or mental perceptions.

Pleasure and pain are the hinges on which our passions turn ; and if we observe how these operate in us ; we may thence form to ourselves some ideas of our passions. Any one reflecting on the thought of the delight which any present or absent thing produces in him, has the idea of love. On the contrary, the thought of the pain which any thing present or absent is apt to produce in us, is what we call hatred. Our love and hatred of inanimate beings is founded on the pleasure and pain we receive from them : but hatred or love, to beings capable of happiness or misery, is often the uneasiness or delight which we find in ourselves from a consideration of their being or happiness. Thus the being and welfare of a man's children producing constant delight in him, he is said constantly to love them.

The uneasiness a man feels on the absence of any thing, is that we call desire ; and the chief, if not the only spur to human industry, is uneasiness. For whatever good be proposed, if its absence carries no pain with it, there is no endeavor after it, there is but a bare velleity,—a term signifying the lowest degree of desire, and that which is next to none. Desire is also abated by the opinion of the unattainableness of the good proposed, as far as the uneasiness is allayed by that consideration.

Joy is a delight in the consideration of a present or an approaching good. Thus a man almost starved has joy at the arrival of relief, even before he has the pleasure of using it.

Sorrow is uneasiness on the thought of a good lost or the sense of a present evil.

Hope is that pleasure which every one finds in himself on the thought of a probable future enjoyment.

Fear is uneasiness at the thought of future evil.

Despair is the thought of the unattainableness of any good.

Locke.

G

Anger is uneasiness on the receipt of an injury, with a purpose of revenge.

Envy is uneasiness caused by the consideration of a good we desire obtained by one we think should not have had it before us.

These last two, envy and anger, having in them a mixed consideration of ourselves and others, are not to be found in all men, because estimation of merits and intentions of revenge are wanting in them. But the rest, terminating in pain and pleasure, are to be found in all men. All the passions are moved by things as they appear to be the causes of pleasure and pain. Thus we extend our hatred to that which has produced pain, because the fear it leaves is a constant pain: but we do not so constantly love what does us good, because pleasure operates not so strongly as pain.

By pleasure and pain I mean not only bodily pain and pleasure, but whatever delight or uneasiness is felt either by sensation or reflection. It is also to be considered that the removing of pain operates as a pleasure, and the diminishing of a pleasure as a pain.

Most of the passions too cause various changes in the body, which changes not being always sensible, do not make a necessary part of the idea of each passion. For shame, which is an uneasiness at the thought of something which will lessen the esteem which others have for us, has not always blushing accompanying it.

I do not mean this as a discourse on the passions; there are more than I have named, and each of those I have noticed would require a much larger discourse. I have merely attempted to show how the ideas we have of them are derived from sensation and reflection.

CHAPTER XXI.

Of Power.

The mind observing an alteration in the simple ideas of things without, and a constant change of its own ideas by the impression of outward objects, and sometimes by the determination of its own choice; and concluding from what has been, that the like changes will still be made by like means; considers in one thing the possibility of being changed, and in another the possibility of making a change; and so comes by the idea of power. Thus we say, fire has a power to melt gold, and gold has a power to be melted. In which case the power we consider is in reference to the change of perceivable ideas: for we cannot observe an alteration in any thing but by conceiving a change of its sensible ideas.

Power thus considered is two-fold, as able to make or to receive a change. The one may be called active, the other passive power. Whether matter be not wholly destitute of active power as God is above passive power, and whether created spirit be not that alone which is capable of both, I shall not now inquire. But since active powers make part of our complex ideas of natural substances, I mention them as such, according to our common apprehension.

Power includes in it some kind of relation, viz. to action and change; so our ideas of extension, duration, and number, contain in them a secret relation of the parts. Figure and motion have something relative in them more visibly; and sensible qualities are but the powers of different bodies in relation to our perceptions. Our idea therefore of power may have a place among our other simple ideas.

We are furnished with the idea of passive power by most sensible things, the substances of which we see in a continual flux, and we look on them as liable

still to the same change. Nor have we fewer instances of active power: for wherever there is change there must be power to make that change. But bodies do not afford us so clear an idea of active power as we have from reflection on the operations of our minds: for there are but two sorts of action, thinking and motion. 1. Of thinking, body affords us no idea at all. 2. Neither have we from body the idea of the beginning of motion; for when the ball obeys the stroke of a billiard stick, it is not the action of the ball, but bare passion; and when it sets another ball in motion, it merely communicates the motion it had received, which gives us but an obscure idea of active power, reaching not to the production of action, but to the continuance of passion. The idea of the beginning of motion we have only from reflecting on what passes within ourselves, where we find by a thought of the mind that we can move our bodies. But bodies afford us no idea of the power to begin action, either by motion or thought.

We find in ourselves a power to begin, continue, or end several actions of our minds and motions of our bodies barely by a thought. This power we call the will: the exercise of the power is volition, or willing. The action or forbearance of action consequent to such command of the mind, is called voluntary; but whatever is done without such thought, is involuntary. The power of perception we call the understanding: it consists of, 1. perception of ideas in our minds; 2. the perception of the signification of signs; 3. the perception of the agreement or disagreement of any of our ideas. All these belong to the understanding, though it be the two latter only that use allows us to say we understand.

The ordinary way of speaking of these two powers, is to say that the understanding and the will are two faculties; a word proper enough, if it be not used so as to breed confusion, by being supposed to stand for

some real beings performing those actions. For when we say, the will is the commanding faculty of the soul, that it is or is not free, that it follows the dictates of the understanding, &c. ; though these and the like expressions may be understood by some in a clear and distinct sense, yet this way of speaking has led many into a confused notion of so many distinct agents within us, and has been no small occasion of wrangling and uncertainty in questions relating to them.

From the consideration of the power which every one finds in himself to begin, continue, or end several actions, arise the ideas of liberty and necessity. All actions reducing themselves to thinking or motion, so far as a man has power to think or not, to move or not, according to the preference of his mind, so far is a man free: wherever doing or not doing will not equally follow on the preference of the mind, there he is not free, though the action be voluntary. So that the idea of liberty is the idea of a power to do or forbear any action, according as either is preferred to the other: where either of them is not in the power of the agent, there he is not at liberty. So that liberty cannot be where there is no thought, no volition, no will; but there may be thought, volition, and will, where there is no liberty. Thus, a tennis-ball in motion or at rest is not considered a free agent, because we cannot conceive it to have volition, or preference of motion to rest, or *vice versa*. A man falling into the water by the breaking of a bridge has not liberty, though he has volition; for the cessation of that motion follows not on his volition. So a man striking himself or his friend by a convulsive motion of his arm, which it is not in his power to forbear, acts by necessity or constraint.

Again, suppose a man locked in a room with agreeable company, in which he prefers staying to going away; his stay is voluntary, but being locked in, he

is not at liberty to go away. So that liberty is not an idea belonging to volition, but to the person having the power of doing or forbearing, as his mind may choose.

We have instances in our own bodies. The heart beats, the blood circulates, which it is not in our power, by any thought or volition, to stop; and in respect of these motions, where rest depends not on choice, man is not a free agent. In the disease called *Chorea Sancti Viti*, convulsive motions agitate the limbs, which are as much under a necessity of moving as a ball struck with a racket. On the other hand, a palsy hinders the legs from obeying the determination of the mind, if it would transfer the body to another place. The sitting still of a paralytic may be voluntary; but in it is a want of freedom. Voluntary is not then opposed to necessary, but to involuntary.

As with the body, so it is with the mind; where we have power to take up, or to lay by, any thought, there we are at liberty. A waking man is not at liberty to think or not to think, any more than he is at liberty whether his body shall touch any other or no. But it is often in his choice to remove his thoughts from one idea to another, as he can at pleasure remove himself from one body to another. But some ideas to the mind, like some motions to the body, are such as it cannot avoid. A man on the rack cannot lay by the idea of pain; and sometimes a boisterous passion hurries our thoughts, as a hurricane does our bodies, without leaving us the liberty of thinking on other things.

Wherever thought, or the power of acting according to its direction, is wanting, there is necessity. This, in an agent capable of volition, when the beginning or continuation of action is contrary to the preference of his mind, is called compulsion; when the hindering or stopping any action is contrary to his volition, it is called restraint. Agents, without thought or volition, are necessary agents.

I leave it then to be considered, whether this may not help to put an end to that long agitated question, whether man's will be free or no? For from what I have said, it seems, that it is as insignificant to ask, whether man's will be free, as to ask whether his sleep be swift, or his virtue square; for liberty, which is but a power, belongs only to agents, and cannot be an attribute or modification of the will, which is also but a power.

I must here warn my reader that ordering, directing, choosing, preferring, &c. &c. will not distinctly enough express volition, unless he will reflect on what he himself does when he wills. For example, preferring does not precisely express the act of volition: for a man may prefer flying to walking; but it cannot be said that he wills it. Volition is an act of the mind, exerting that dominion it believes itself to have over any part of the man; and the will is the faculty to do this, and is in effect nothing more than a power of the mind to determine its thoughts to the producing, continuing, or stopping any action, so far as it depends on us. For, can it be denied, that whatever agent has power to think of its own actions, and to prefer their doing or omission, has that faculty called will? Liberty, on the other hand, is the power a man has to do or forbear any action according as he himself wills it. Will is one power, and freedom another. To ask whether the will has freedom, is to ask whether one power has another power; a question too absurd to need an answer. Powers belong only to agents, and are attributes of substances, not of powers: so that to ask, whether the will be free, is to ask, whether the will be a substance? or rather to suppose it, for freedom can properly be attributed to nothing else. If freedom can be applied to power, it may be attributed to the power that is in a man to produce, or to forbear producing, motion in parts of his body, which is that which denominates him free, and is freedom itself: but

if any one should ask whether freedom itself were free, he would be suspected not to understand what he said.

However, the name 'faculty,' which men have given to the will, has led to a way of talking of it, which, disguising its true sense, serves a little to palliate the absurdity. Will, in truth, is but a power to choose; and when it is considered barely as an ability to do something, the absurdity of saying it is free or not free, will easily discover itself. For if it be reasonable to talk of faculties as distinct beings that can act, we might suppose a speaking faculty, a walking faculty, and a dancing faculty; and we may as properly say, that the dancing faculty dances, as that the will chooses, or the understanding conceives; and it is as intelligible to say, that the power of speaking directs the power of singing, as that the will directs the understanding: for all these being different powers in the mind, or in the man, he exerts them as he thinks fit; one power is not operated on by another. The power of thinking operates not on the power of choosing; yet this it is we say, when we say that the understanding operates on the will. This or that actual thought may be the occasion of exercising the power a man has to choose, as the playing of such a tune may occasion the dancing of such a dance. But it is not one power that operates on another; it is the mind that exerts these powers: for powers are relations, not agents; and that which has the power, or not the power, to operate, is that alone which is free or not free, and not the power itself.

The attributing to faculties that which belongs not to them, has given occasion to this way of talking, very little to the advancement of our knowledge; not that I deny that there are faculties both in body and in mind: both have their powers of operating, else neither the one nor the other could operate. The fault has been that faculties have been spoken of as so many

distinct agents. It being asked what digested our food, it was a ready answer to say, that it was the digestive faculty. And so in the mind the intellectual faculty understood, and the elective faculty willed, which is to say that the ability to digest, digested ; the ability to understand, understood : for faculty, ability, and power, I think, are but different names of the same thing. These ways of speaking amount then only to this ; that digestion is performed by something able to digest, and understanding by something able to understand. Very strange would it be, were it otherwise.

The proper question is not whether the will be free, but whether the man be free. Thus I think, 1. that so far as any one, preferring the existence to the non-existence of any action, and *vice versa*, can by choice of his mind make it exist, or not, so far he is free. So far as the power reaches of acting or not acting, by the determination of his own thought preferring either, so far a man is free ; and we can scarcely tell how to imagine any being freer, than to be able to do what he wills.

But the inquisitive mind of man is not content with this ; and it passes for a good plea that a man is not free at all, if he be not as free to will, as to act what he wills : and this is what is meant when it is disputed whether the will be free. And as to that, I imagine, 2. that willing being an action, and freedom consisting in a power of acting or not acting, a man in respect of willing, when any action in his power is proposed to his thoughts, as presently to be done, cannot be free : for it being unavoidable that the action should exist or not, and its existence or non-existence following the determination of his will, it is necessary that he will the one or the other, since one must necessarily follow, and that which follows does so by his willing it. Liberty consists in a power to act or not

to act, which, in regard to volition, a man on such a proposal has not : the act of volition, or preferring one of the two, being that which he cannot avoid, a man in respect of that act of willing is under a necessity, and so cannot be free.

This is evident, that in all proposals of present action a man is not at liberty to will or not to will, because he cannot forbear willing. It is plain that a man that is walking, to whom it is proposed to cease walking, is not at liberty whether he will determine himself to walk or cease to walk, or no. He must necessarily prefer one to the other. The mind has not a power to forbear willing. Since then it is plain that a man is not at liberty whether he will or no, the next question is, whether he be at liberty to will which of the two he pleases, motion or rest. This is equivalent to asking whether a man can will what he wills, or be pleased with what he is pleased with. They who make a question of this must suppose one will to determine the acts of another, and another to determine that, and so on *in infinitum*.

To avoid such absurdities, we should establish in our minds determined ideas of the things under consideration. If the ideas of liberty and volition were established in our understandings, and carried with us in our minds through the questions that are raised about them, a great part of the difficulty would be much easier resolved.

First, then, it is to be remembered, that freedom consists in the dependence of the existence or non-existence of any action on our volition of it, and not in the dependence of any action, or its contrary, on our preference. A man standing on a cliff is at liberty to leap down into the sea ; not that he has power to leap upwards so many yards in a contrary direction, but he has a power to leap or not to leap. But if a greater force than his own holds him fast, or throws

him down, he is no longer free. In this consists freedom, in our being able to act or not to act according as we shall choose or will.

2. We must remember that willing is an act of the mind, exerting its power to produce any action. Under the term action I comprehend also the forbearance of any action; as sitting still, holding one's peace, require as much the determination of the will as the contrary.

3. The will being a power in the mind to direct the operative faculties; to the question, what is it determines the will? the proper answer is, the mind; for that which determines the power to this or that direction is but the agent exercising his power that particular way. If it be asked, what determines the will in every particular instance, I answer, the motive for continuing in a state or action is satisfaction, the motive to change is uneasiness. This is the great motive that puts the mind in action, which we will call determining the will.

In explaining this it will be necessary to premise, that though I have expressed the act of volition by choosing, preferring, and the like terms, yet any one may better understand what it is by reflecting on his own mind, and observing what it does when it wills, than by any articulate sound whatever. This caution I think the more necessary, because the will is often confounded with several of the affections, especially desire, which has been no small occasion of obscurity: for he that observes what passes in his mind when he wills, shall see that the power of volition is conversant only about that determination of the mind whereby it endeavors to give rise to any action which it believes to be in its power. This shows that the will is distinguished from desire, which in the same action may have quite a contrary tendency from that which our wills set us on. A man whom I cannot refuse, may oblige me to use persuasions to another, which I may

wish not to prevail on him. In this case the will and desire run counter ; whence it is evident that desiring and willing are two distinct acts of the mind.

To return to the inquiry, What is it that determines the will in regard to our actions? I imagine it to be not the greatest good in view, but some present and pressing uneasiness. This uneasiness we may call desire. All pain of body and disquiet of mind is uneasiness, and with this is joined desire of ease ; and this desire is equal to the pain, and inseparable from it. There is also a desire of absent positive good ; and as much as we desire any absent good, so much are we in pain for it. But all absent good does not cause pain equal to its acknowledged greatness, as all pain causes desire equal to itself : and, therefore, absent good may be considered without desire. But so much as there is of desire, so much there is of uneasiness.

That desire is a state of uneasiness every one who reflects will quickly find. Who has not felt in desire what the wise man says of hope, that it being deferred ‘ makes the heart sick ? ’

That which determines the will is the uneasiness of desire fixed on some absent good, negative or positive, as I shall endeavor to show both from experience and the reason of the thing. When a man is perfectly content with the state he is in, what will is there left but to continue in it ? And thus we see our all-wise Maker, knowing what it is that determines the will, has put into man the uneasiness of hunger and thirst, and other desires, to determine their wills for the preservation of themselves and the continuation of the species. For if the bare contemplation of these good ends had been sufficient to determine the will, we should have had none of these natural pains, and, perhaps, in this world, little or no pain at all.

It seems so settled a maxim, by the consent of all mankind, that the greater good determines the will,

that when I first published my thoughts on the subject, I took it for granted; but on stricter inquiry, I conclude that the greater good does not determine the will, until our desire make us uneasy in the want of it. Convince a man that plenty has advantages over poverty, yet so long as he is content with the latter, his will is never determined to any action that shall bring him out of it. Let a man be persuaded of the advantages of virtue, yet till he feels uneasiness in the want of it, his will will not be determined to the pursuit of it, but other uneasinesses will carry his will to other actions. Or let a drunkard see that his health decays and his estate wastes, yet the return of his uneasiness drives him to the tavern, though in view of the loss of health and plenty, and perhaps of the joys of another life. It is not for want of viewing the greater good, for he sees and acknowledges it, and, at intervals, resolves to pursue it; but when the uneasiness to miss his accustomed delight returns, the greater good loses its hold, and the present uneasiness determines the will. And thus he is in the state of the unhappy complainer, *Video meliora proboque, deteriora sequor*.

If we inquire why it is uneasiness alone operates on the will, we shall find that we being capable of but one determination of the will at once, the present uneasiness naturally determines the will; forasmuch as while we are under any uneasiness, we cannot apprehend ourselves happy, or in the way to be so; pain and uneasiness being felt to be inconsistent with happiness, and spoiling the relish even of the good things we have. And, therefore, that which determines the will to action, will be the removing of pain, as the first step to happiness. Another reason may be, because that alone is present, and it is against nature that any thing should operate where it is not. It may be said, that absent good may be made present by contemplation. The idea may be in the mind,

but nothing will be able to counterbalance the removal of any uneasiness till it raises our desire. Many have had representations set before their minds of the joys of heaven, which they acknowledge possible and probable too, who yet are content to take up their happiness here. So the prevailing uneasiness of their desires after the enjoyments of this life determines their wills, and they are not moved towards the good things of another life, considered as ever so great.

Were the will determined by the greater good, I do not see how it could ever get loose from the infinite joys of heaven once proposed and considered as possible : for all absent good being only possible, but not infallibly certain, it is unavoidable that the infinitely greater possible good should constantly determine the will ; and then we should keep steadily in our course towards heaven without directing our actions to any other end ; the eternal condition of a future state outweighing any worldly pleasure. If the greater good determines the will, so great a good once proposed could not but hold it fast without ever letting it go again. That this is not so, is visible in experience ; the infinitely greatest good being often neglected to satisfy the uneasiness of our desires pursuing trifles. But though the greatest good, which has sometimes affected the mind, does not steadfastly hold the will, yet any great uneasiness having once laid hold on the will, lets it not go. Thus any vehement pain of the body, the passion of love, or the desire of revenge, never lets the understanding lay by the object ; but all the thoughts are employed that way by the determinations of the will influenced by that uneasiness. Whence it appears that the will is determined by uneasiness.

I have hitherto instanced the uneasiness of desire as that which determines the will, because that is the chief impulse, for which reason will and desire are often confounded. But the uneasiness of other pas-

sions, as of aversion, fear, anger, shame, envy, &c. frequently influence the will. These passions are scarcely any of them unmixed with others; though that carries the name which appears most in the present state of the mind. There is scarcely any passion without desire, for wherever there is uneasiness there is desire; for we constantly desire happiness, and whatever we feel of uneasiness we want so much of happiness. Besides, the present moment not being our eternity, we look beyond the present, and desire goes with our foresight. So that in joy itself there is a desire to continue it, and a fear to lose it: and when a greater uneasiness takes place, the will is by that determined to some new action, and the present delight neglected.

But being in this world distracted with different desires, the next inquiry will be, which has the pre-cedency in determining the will? That ordinarily which is the most pressing of those that can be removed: for will being the power of directing our faculties to some action, for some end, cannot be moved towards that which is unattainable; therefore very great uneasinesses move not the will, when they are judged not capable of a cure. The greatest present uneasiness then, which can be removed, for the most part determines the will: for we must bear in mind that the only object of the will is some action of ours, and we produce nothing by willing it, but some action in our power.

If it be asked, what moves desire? I answer, happiness. Happiness and misery are extremes, the bounds of which we know not. But of some degrees of both we have lively impressions, by what I shall comprehend under the names of pleasure and pain; there being pleasure and pain of the mind as well as of the body. Happiness, in its full extent, is the utmost pleasure, and misery is the utmost pain of which we are capable: and the lowest degree of happiness is so

much ease from pain, and so much present pleasure; as without which any one cannot be content. Whatever has an aptness to produce pleasure we call good, and whatever is apt to produce pain we call evil. Farther, though what is apt to produce any degree of pleasure be good, and what is apt to produce any degree of pain is evil, yet we do not call it so when it comes in competition with a greater of its sort. So that if we will rightly estimate good and evil, we find it lies much in comparison : for the cause of every less degree of pain, and every greater degree of pleasure, is good, and *vice versa*.

Though all good be the proper object of desire, yet all good does not necessarily move every man's desire, but only that part which is necessary to his happiness. All other good, however great, excites not a man's desires, who looks not on it to make the happiness wherewith he can be satisfied. There is no one so senseless as to deny that there is pleasure in knowledge ; and the pleasures of sense have too many followers to leave a question whether men be taken with them or no. Now let one man pursue sensual pleasures and another knowledge ; though each acknowledges pleasure in what the other pursues, yet each is satisfied without what the other enjoys. But as soon as the studious man's hunger and thirst make him uneasy, he is presently determined to eating and drinking ; and on the other hand, the epicure buckles to study when shame shall make him uneasy in the want of knowledge. Thus, however earnest men are in pursuit of happiness, they may have a view of good without being moved by it, if they can make up their happiness without it. But they can feel no uneasiness without being moved. The greatest visible good does not raise men's desires in proportion to its greatness, though every trouble sets us on work to get rid of it. The reason of this is evident. All present pain makes part of our present misery ; but all absent good

makes not part of our happiness, nor the absence of it part of our misery: if it did, we should be always infinitely miserable. All uneasiness therefore being removed, a moderate portion of good makes up a happiness with which men can be satisfied. And, indeed, in this life there are not many who enjoy a constant train of moderate pleasures without mixture of uneasiness; yet they could be content to stay here for ever, though they cannot deny that there may be a state of eternal joys after this life, far surpassing all the good that is to be found here.

The ordinary necessities of our lives fill great part of them with the uneasiness of hunger, thirst, heat, cold, weariness, &c. to which if we add accidents, and a thousand irregular desires, we shall find a very small part of our life free from uneasiness, so as to leave us vacant for the attraction of remoter good. For the removing of the pains we are at present pressed with, being the first thing to be done in order to happiness, absent good is jostled out to make way for the removal of the uneasinesses we feel, till repeated contemplation has brought it nearer to our mind, and raised in us some desire, which then beginning to make part of our present uneasiness, comes in its turn to determine the will.

And thus, by a due consideration of any good, it is in our power to raise our desires in proportion to its value, whereby it may work on the will: for good, till it has raised desires in our minds, reaches not our wills; our wills being under the determination only of present uneasiness; the balancing, when there is any, being only which uneasiness shall be first removed. For so long as any desire remains in the mind there is no room for good as such to determine the will; because the first step towards happiness being to get out of misery, the will can be at leisure for nothing else till every uneasiness be removed.

There being a great many uneasinesses always soliciting us, it is natural that the most pressing should determine the will to the next action, and so it does, but not always : for the mind having a power to suspend the satisfaction of any of its desires, is at liberty to consider the objects of them, and weigh them with others. In this lies man's liberty, and from not using it aright come all the errors into which we run in the conduct of life. To prevent this, we have a power to suspend the prosecution of this or that desire ; and in this seems to consist that which is, I think improperly, called free will : for during this suspension we have opportunity to judge of the good or evil we are going to do ; and when on due examination we have judged, we have done all that we can in pursuit of our happiness ; and it is not a fault, but a perfection of our nature, to desire, will, and act, according to the last result of a fair examination.

This is so far from being an abridgment, that it is the end and use of our liberty ; and the farther we are removed from such a determination, the nearer we are to misery and slavery. A perfect indifferency of mind, not determinable by its last judgment of good or evil, would be as great an imperfection on one side, as the want of indifferency to act or not to act, till determined by the will, would be on the other side. It is as much a perfection that the power of preferring should be determined by good, as that the power of acting should be determined by the will. Were we determined by any thing but the result of judgment, we were not free, the end of our freedom being that we might attain the good we choose : and therefore every man is put under the necessity of being determined by his judgment what is best for him to do ; and to deny that a man's will follows his judgment, is to say that he wills and acts for an end he would not have. For if he prefers it before any other, it is

plain he thinks better of it than of any other, unless he can have and not have it, will and not will it, at the same time.

If we look at those superior beings who enjoy perfect happiness, we shall have reason to judge that they are more steadily determined in their choice of good than we are, and yet they are not less happy or free. Even God himself, if we may so speak, cannot choose what is not good.

But to give a right view of this mistaken part of liberty, let me ask, Is it worth the name of freedom to be at liberty to play the fool? If to break loose from the restraint of judgment, which keeps us from choosing the worse, be true liberty, madmen and fools are the only free men; but nobody would choose to be mad for the sake of such liberty, but he that is mad already. The constant desire of happiness and the constraint it puts on us to act for it, no one thinks an abridgment of liberty. God himself is under the necessity of being happy, and the more any intelligent being is so, the nearer he is to perfection. That in this state of ignorance we might not mistake true felicity, we are endowed with a power to suspend any particular desire. This is standing still, where we are not assured of the way; examination is consulting a guide, determination is following it. He that has power to act or not to act according to that determination, is free. He that has his chains knocked off and the prison doors set open, is at liberty, because he may go or stay, though he may be determined to stay by the darkness of the night, or by other circumstances. He ceases not to be free, though the desire of some convenience makes him stay in his prison.

As, therefore, the perfection of our nature lies in a careful pursuit of true happiness, so the care that we mistake not imaginary for real happiness is the foundation of our liberty. The stronger ties we have to the

pursuit of happiness, the more are we free from a necessary compliance with our desire set on any apparent good, till we have examined whether it has a tendency to real happiness. This is the hinge on which turns the liberty of intellectual beings; that they can suspend their determination till they have informed themselves whether the particular thing desired make part of that which is their greatest good. Whatever necessity determines to the pursuit of real bliss, the same necessity establishes deliberation and scrutiny of each desire, whether the satisfaction of it does not interfere with our true happiness. This appears to me to be the great privilege of intellectual beings, and the inlet of all the liberty that can be useful to them; that they can suspend their desires from determining their will to any action till they have examined the good and evil of it. When we have done this, we have done our duty.

But if any extreme disturbance possesses our whole mind, as when the pain of the rack or any violent passion allows us not the liberty of thought, and we are not able to examine fairly, God, who knows our frailty, will judge as a kind and merciful Father. But the forbearance of a too hasty compliance with our desires, so that our understandings may be free to examine, being that on which a right direction of our conduct to true happiness depends, in this we should employ our chief care, and should take pains to suit the relish of our minds to intrinsic good, and not permit a supposed weighty good to slip out of our minds, till we have formed appetites suitable to it, and made ourselves uneasy in the want of it. Nor let any one say that he cannot govern himself; for what he can do in the presence of a prince or a great man, he can do in the presence of God.

From what has been said it is easy to see how, though all men desire happiness, yet their wills carry them so contrarily. The various choices that men

make do not argue that they do not all pursue good, but that the same thing is not good to every man. Were all the concerns of man terminated in this life; why one followed study, and another riches, and another luxury, would not be that they did not all aim at happiness, but because their happiness was placed in different things. And, therefore, the physician was right when he said to his patient, ' If you have more pleasure in wine than in sight, wine is good ; but if the pleasure of seeing be greater than that of drinking, wine is bad.'

The mind has a different relish as well as the palate : hence I think that the philosophers of old did in vain inquire whether *summum bonum* consisted in bodily delights or in virtue. They might as well have disputed whether apples or plums had the best relish : for as pleasant tastes depend on the palate, so happiness consists in having the things which produce the greatest pleasure. If men, therefore, can in this life only enjoy, it is not strange that they should seek their happiness by avoiding what pains, and by pursuing what delights them. This may serve to show us why, though all men desire happiness, yet they are not moved by the same things. Men may choose differently, yet all choose right.

These things will give us a view into the state of human liberty. Liberty consists in a power to do or not to do ; but this seeming to comprehend only the actions of a man consecutive to volition, it is farther inquired whether he be at liberty to will or no ? And it has been answered, that in most cases man is not at liberty to forbear volition ; but he is at liberty to suspend his choice till he has examined whether the thing proposed be of a nature to make him happy or no : for when he has chosen it, and thereby it becomes part of his happiness, and raises desire, it sets him at work in pursuit of his choice on all occasions. And here we may see how a man may justly incur punishment,

though he wills that which he then judges to be good : for though his will be determined by that which is judged good by his understanding, yet it excuses him not ; because, by too hasty choice, he has imposed on himself wrong measures of good and evil.

What has been said may discover to us the reason why men pursue happiness by contrary courses. But since men are always in earnest in matters of happiness and misery, the question remains, how men come often to prefer the worse to the better.

To account for the various ways men take, we must consider whence the uneasinesses that determine the will have their rise :—1. some are from causes not in our own power, such as pains of the body, want, disease, &c. which operate forcibly on the will, and turn men's lives from what before they judged to lead to happiness ; every one not being able to raise in himself desires of future good, strong enough to counterbalance the uneasiness he feels in those bodily torments, and to keep his will steady in the choice of those actions which lead to happiness ; 2. other uneasinesses arise from our desires of absent good, which desires depend on the judgment we form, and the relish we have for that good, in both of which we are apt to be misled, and that by our own fault.

I shall first consider the wrong judgments men make of future good and evil. In present happiness and misery a man never chooses amiss, because he knows what pleases him : for the pain and pleasure being as great as, and no greater than it is felt, the present good or evil is really as much as it appears : and, therefore, if our actions drew no consequences after them, we should never err in our choice. Were the pains of industry and of starving set before us, nobody would doubt which to choose : were the satisfaction of lust and the joys of heaven offered at once to any one's possession, he would not err in his determination. But since our present actions carry not all

the happiness and misery with them that depend on them, but are causes of good and evil which they bring on us when themselves have passed, our desires look beyond the present, and carry the mind to absent good, according as we think it necessary to our happiness ; without which we are not moved by absent good : for in this narrow scantling of capacity, wherein we enjoy but one pleasure at once, which, while it lasts, makes us think ourselves happy, it is not all remote good that affects us, since we judge that we are already happy, being content : but when any new uneasiness comes in, we are set afresh on work in pursuit of happiness.

The aptness to conclude that they can be happy without it, is the occasion that men are not moved by the desire of absent good : for while such thoughts possess them, the joys of a future state move them not, and the will is left to the pursuit of nearer satisfactions. Change but a man's views, and let him see that virtue and religion are necessary to his happiness ; let him see that there is a righteous Judge ready to render to every man according to his deeds, then the measures of good and evil that determine his choice are mightily changed : for since no pleasure or pain in this life can bear any proportion to endless happiness or exquisite misery hereafter, actions will have a preference, according as they serve to secure that perfect and durable happiness hereafter.

But to account for the misery that men often bring on themselves, notwithstanding they pursue happiness, we must consider how things come to be represented under deceitful appearances, and that is by the judgment pronouncing wrongly concerning them. To see the causes of wrong judgment, we must remember that things are judged good or bad in a double sense :— 1. that which is properly good or bad is nothing but pleasure or pain : 2. but, because not only present pleasure or pain, but that which is apt to bring it on us

hereafter is adapted to move a creature that has foresight; therefore things that draw after them pleasure and pain are considered as good and evil.

The wrong judgment that misleads us lies in misreporting on the various comparisons of these. This wrong judgment is not what one man may think of the determination of another, but what every man himself must confess to be wrong; for, since every intelligent being seeks happiness, it is impossible that any one should neglect what would tend to his happiness, except by wrong judgment. As to present pleasure and pain, the mind, as has been said, never mistakes; yet, when we compare present pleasure or pain with future, we often make wrong judgments, taking our measures of them in different positions of distance. Nearer objects are apt to be thought larger than those more remote; and so with pleasures and pains, those at a distance have the disadvantage in comparison. So men, like spendthrift heirs, for small matters in possession part with great ones in reversion. That this is wrong judgment every one must allow; since that which is future will be present, and will show itself in its full dimensions. Were the pleasure of drinking accompanied by the sickness that is sure to follow it, nobody would ever let wine touch his lips. But if pleasure or pain can be so lessened only by a few hours removal, how much more so will it be by a farther distance! I mention not here the wrong judgment, whereby the absent are not only lessened, but reduced to perfect nothing; for that lies not in comparing the greatness of future good and evil, but in another sort of wrong judgment, which is concerning good or evil, as it is considered to be the cause of pleasure or pain that will follow from it.

The cause of our judging amiss seems to me to be the weak and narrow constitution of our mind. We cannot enjoy two pleasures at once, and scarcely any pleasure while pain possesses us. The present plea-

sure, if not very languid, so fills our narrow souls, that it leaves scarcely any thought of things absent : or, if there be some pleasures not strong enough to exclude the consideration of things at a distance, yet we have so great an abhorrence of pain, that a little of it extinguishes all our pleasures. Hence we desire to be rid of the present evil, which we think nothing absent can equal, let what will follow. And because abstinence from pleasure is a pain, it is no wonder that it operates after the same manner as pain does, and lessens in our thoughts what is future.

Add to this, that absent good, especially if of a sort with which we are unacquainted, is seldom able to counterbalance any present uneasiness : for its greatness being no more than what shall be really tasted when enjoyed, men are apt enough to lessen that, and to conclude that it may not answer the opinion that passes of it ; they having often found that not only what others have magnified, but what they themselves have enjoyed at one time, has proved insipid at another. But this is a false way of judging when applied to a future life ; for that being intended for a state of happiness, must certainly be agreeable to every one's wish and desire.

As to things good and bad in their consequences we judge amiss in several ways : 1. when we judge that so much evil does not depend on them as there really does ; 2. when we judge that though the consequence be of moment it may not be certain, or may by some means be avoided, as by industry, repentance, &c. It were easy to show this to be wrong in every particular, but I shall only mention in general, that it is irrational to venture a greater good for a less without a due examination proportionable to the weightiness of the matter. This every one must confess if he considers the usual causes of this wrong judgment, whereof the following are some :—1. Ignorance. He that judges without informing himself

to the utmost that he is capable, cannot acquit himself of judging amiss. 2. Inadvertency. When a man overlooks that which he knows. This is an affected ignorance misleading our judgments as much as the other. Judging is balancing an account; if therefore on either side sums that should have been reckoned are by haste left out, this precipitancy causes as wrong a judgment as perfect ignorance. That which most commonly causes this is some present pleasure or pain heightened by our passionate nature, most strongly wrought on by what is present. To check this precipitancy understanding was given us to search and then to judge. Without liberty the understanding would be to no purpose, and without understanding liberty would signify nothing. If a man sees what would do him good or harm without being able to move to or from it, what is he the better for seeing? And he that is at liberty to ramble in darkness, what is his liberty better than if he were driven as a bubble by the wind? The being driven by a blind impulse from without or from within, is little odds. The principal use of liberty is to take a view of the consequence of what we are going to do, as much as the weight of the matter requires. How much sloth, passion, the prevalence of fashion, or acquired indispositions contribute to wrong judgments, I shall not here inquire. I shall only add one other, which, though little noticed, is of great influence.

All men desire happiness; but when they are rid of pain they take up with any pleasure that custom has endeared, and rest satisfied in that till some new desire disturbs them: for since we find that we cannot enjoy all sorts of good, we fix not our desires on any apparent greater good unless it be judged necessary to our happiness. This is another occasion of men judging wrong when they take not that to be necessary to their happiness which really is so. Thus are we misled both in the choice of good and in

the means to it. But when man misses his great end, happiness, whether by placing it where it is not, or by neglecting the means, he has not judged right. This mistake arises from the real or supposed unpleasantness of the way to this end, it seeming to men preposterous to make themselves unhappy in order to happiness.

The last inquiry then is, Can man change the pleasantness or unpleasantness of any action? In many cases he can. Men may correct their palates, and give a relish to what they suppose has none. The tastes of the mind also may be changed as those of the body; due consideration will do it in some cases; practice, application and custom in most. Bread or tobacco, though shown to be useful to health, may be neglected from a disrelish to them; reason first recommends, then custom makes them pleasant. It is so in virtue. Actions are pleasing or displeasing, either in themselves, or as a means to an end. The eating of a well-seasoned dish may give pleasure to the palate without reference to any other end: the consideration of the pleasure there is in health and strength may make us swallow an ill-relished potion. In the latter of these an action is rendered more or less pleasing by the contemplation of the end: but the pleasure of the action itself is best acquired by use and practice. Trials reconcile us to that which we looked on with aversion, and repetition wears us into a liking of what at first displeased us. Habit has powerful charms; yet it is neglected to a degree that will be entertained as a paradox, if it be said that men can make actions more or less pleasing to themselves, and thereby remedy that to which one may justly impute a great deal of their wandering. Fashion having settled wrong notions, and custom ill habits, men's tastes are corrupted: pains should be taken to rectify these, and give a relish to that which is conducive to happiness. This every one must confess he

can do ; and when misery overtakes him, he will condemn himself for the neglect of it.

To enlarge on the wrong judgments whereby men mislead themselves would make a volume. But whatever neglect of what is in their power may put men out of their way to happiness, it is certain that morality, established on its true foundations, cannot but determine the choice in any one that will consider. And he that will not be so far rational as to reflect seriously on infinite happiness and misery, must condemn himself as not making a right use of his understanding. The rewards and punishments of another life are of weight enough to determine the choice against any pleasure or pain this life can show, when the eternal state is considered but in its bare possibility. He that will allow endless happiness to be but the possible consequence of a good life here, and the contrary the possible reward of a bad one, must judge very much amiss if he does not conclude, that a virtuous life is to be preferred to a vicious one, though virtue here had nothing but pain, and vice nothing but pleasure ; which is yet for the most part quite otherwise. But when infinite happiness is put into one scale against infinite misery in the other ; if the worst that comes to the pious man, if he mistakes, be the best that the wicked can attain to, if he be right, who without madness can run the venture ? If the good man be right, he is happy ; if he mistake, he is not miserable. If the wicked be right, he is not happy ; if he mistake, he is miserable. I have said nothing of the certainty or probability of a future state, designing only to show on his own principles the wrong judgment of him who prefers a vicious life while he knows that a future life is at least possible.

To conclude this inquiry, which, as it stood before, I myself from the beginning fearing, and a judicious friend, since the publication, suspecting to have some mistake, I was put on a review of this chapter ;

wherein lighting on a scarcely observable slip I had made in putting one seemingly indifferent word for another, that discovery opened to me this present view, which I here submit to the learned world, and which in short is this: 'Liberty is a power to act or not to act according as the mind directs.' A power to direct the operative faculties to motion or rest is that which we call the will. That which determines the will to any change of operation, is uneasiness accompanied with desire. Desire is always moved by evil to fly from it, because freedom from pain is a necessary part of our happiness: but every good does not constantly move desire, because it may not be taken to make part of our happiness: for all we desire is, to be happy. But though this desire of happiness operates invariably, yet the satisfaction of any particular desire can be suspended, till we have examined whether or not the apparent good makes part of our happiness. The result of our judgment determines the man, who could not be free, if his will were determined by any thing but his own mind guided by his own judgment. Liberty by some is placed in an indifferency antecedent to the determination of the will. I wish these persons had told us whether this indifferency be antecedent to the thought and judgment of the understanding, as well as to the decree of the will: for it is hard to state it between them, because the determination of the will immediately follows the judgment of the understanding; and to place liberty in an indifferency, antecedent to the judgment of the understanding, is to place it in a subject incapable of it, no agent being capable of liberty but in consequence of thought and judgment. I am not nice about phrases, and therefore consent to say that liberty is placed in indifferency; but it is an indifferency after the judgment of the understanding, and even the determination of the will; and this indifferency is not of the man (who, having judged, is no

longer indifferent), but an indifferency of the operative powers, which are able to forbear operating after, as before the decree, of the will : v. g. I have the ability to move my hand or to let it rest ; that operative power is indifferent to move or not to move. In that respect I am free. My will determines the power to rest ; I am yet free, because the indifferency of that power, to act or not to act, yet remains : the power of moving my hand is not impaired by the determination which at present orders rest : the indifferency of the power will appear if the will puts it to the trial by ordering the contrary. But if the hand be seized by a palsy, the indifferency is gone, and with it my liberty, and I am under the necessity of letting my hand rest. Or if my hand be put in motion by a convulsion, the indifferency is in that case taken away by motion, and my liberty is lost.

In a former edition of this treatise I gave an account of the ideas of will, volition, liberty, and necessity, according to the light I then had ; and now, as a lover of truth, I own some change of opinion, which I think I have discovered ground for.

Before I close this chapter, it may be to our purpose to take a little more exact survey of action. I have said above, that we have ideas but of two sorts of action, viz. motion and thinking. These, though counted actions, will, if nearly considered, not be found to be always perfectly so : for there are instances of both kinds which will be found rather passions than actions. In these instances the substance that has motion or thought receives the impression from without, and acts by the capacity it has to receive such an impression ; and such a power is not an active power, but a mere passive capacity in the subject. Sometimes the substance or agent puts itself into action by its own power, and this is properly active power. Whatever modification a substance has, whereby it produces any effect, that is called

action; as a solid substance, by motion, alters the sensible ideas of another substance. Yet this motion is but a passion, if received from some external agent; so that the active power of motion is in no substance which cannot begin motion. So in thinking, a power to receive ideas or thoughts from the operation of any external substance is called a power of thinking: but this is but a passive power. But to be able to bring into view ideas at one's own choice, and to compare which one thinks fit, this is an active power. This reflection may preserve us from some mistakes which grammars and the frame of languages may lead us into; since verbs called active do not always signify action, v. g. I see the moon, or I feel the heat of the sun, though expressed by a verb active, signifies not any action, but the reception of ideas wherein I am barely passive. But when I turn my eyes another way, or remove from the sun-beams, I am active, because, by a power within myself, I put myself into that motion.

And thus I have given a view of our original ideas, from whence all the rest are derived and made up: which may all be reduced to these primary ones, viz. extension, solidity, mobility, which by our senses we receive from body; perceptivity, or the power of thinking; motivity, or the power of moving; which by reflection we receive from our minds. I use these words to avoid the danger of being mistaken in the use of those which are equivocal; to which, if we add existence, duration, number, which belong both to the one and the other, we have perhaps all the original ideas on which the rest depend: for by these may be explained colors, sounds, tastes, smells, and all other ideas. But my present purpose being only to inquire into the knowledge the mind has of things by the ideas and appearances which God has fitted it to receive from them, and how the mind comes by that knowledge, rather than into their causes, I shall not set my-

self to inquire into the peculiar constitution of bodies, whereby they produce in us the ideas of their sensible qualities; it sufficing to observe, that gold or saffron has a power to produce in us the idea of yellow; snow and milk, the idea of white; which we can only have by our sight, without examining the figure or motion of the particles which cause in us that particular sensation; though when we go beyond the bare ideas in our minds, we cannot conceive any thing else to be in any object whereby it produces different ideas in us, but the different bulk, figure, number, texture, and motion of its insensible parts.

CHAPTER XXII.

Of mixed Modes.

Having treated of simple modes, and given instances of some of the most considerable of them, we are now to consider those we call mixed modes; such are the complex ideas we mark by the names 'obligation,' 'drunkenness,' 'a lie,' &c. which, consisting of combinations of simple ideas, I have called mixed modes, to distinguish them from simple modes: these mixed modes being also such combinations of simple ideas as are not marks of real beings, but independent ideas put together by the mind, are thereby distinguished from the complex ideas of substances.

That the mind, in receiving its simple ideas, is wholly passive, experience shows us; but if we consider the ideas we are now speaking of, we shall find their original quite different. The mind often exercises an active power in making these combinations: for being once furnished with simple ideas, it can make a variety of complex ideas, without examining whether they exist so together in nature. And hence these ideas are called notions, as having their origin more in the thoughts of men than in the reality of things; though I do not deny but several of them

might be taken from observation : for the man who first framed the idea of hypocrisy might have taken it from the observation of one who made show of good qualities he had not, or have framed the idea without such pattern : for several of those complex ideas, which were consequent to the establishment of society, must have been in the minds of men before they existed any where else ; and many names for those ideas were in use before the combinations they stood for existed.

Indeed, now that language abounds with words standing for such combinations, a usual way of getting these ideas is by explication of the terms : for consisting of a combination of simple ideas, they may be represented to the mind of him who understands the words of the simple ideas, though the combination were never really presented to his senses. Thus a man may have an idea of sacrilege or murder, without ever seeing either of them committed.

Every mixed mode consisting of many simple ideas, it may be inquired how such a multitude comes to make one idea, since the combination does not always exist in nature. I answer, it has its unity from the mind combining the simple ideas, and considering them as one complex one consisting of those parts ; and the mark of this union is the one name given to the combination : for men seldom consider any number of simple ideas to make one complex one, but such collections as there are names for. Thus a man's killing his father is called parricide ; but the killing an old man, having no particular name, is not taken for a complex idea, nor a distinct species of action from killing another man.

If we inquire what causes men to make some combinations of ideas into mixed modes, and neglect others equally apt to be so combined, we shall find the reason to be the end of language, which being to communicate thoughts with all despatch, men make

such collections as they have frequent use for, leaving others which they seldom have occasion to mention ; choosing rather, when they need, to enumerate the particular ideas, than to burden their memories with names that they seldom use.

Thus it comes to pass that in every language there are words which cannot be rendered by any one single word in another : for the customs of one nation make several combinations of ideas necessary to one, which another people never have occasion to use. Thus *δορπακιμὸς* among the Greeks, and *proscriptio* among the Romans, stood for complex ideas, which were not in the minds of other people ; and, therefore, in other countries there were no names for them.

Hence we see why languages constantly change : because change of customs, bringing new combinations of ideas, new names are annexed to them, and they become new species of complex modes. How much time is thereby saved may be seen by any one who will enumerate the ideas that 'reprieve' or 'appeal' stand for ; and, instead of the names, use a periphrasis to make any one understand their meaning.

Though I shall have occasion to consider this more at large when I come to treat of words, yet I have taken thus much notice here of mixed modes, which being transient combinations of simple ideas, exist only in the mind by their names : for if we should inquire whether the idea of a triumph or apotheosis exists, it is evident that neither could exist at once in the things themselves, being actions that require time for their performance. And as to the mind, where they are supposed to lodge, they have but an uncertain existence there, and so we annex them to the names that excite the ideas in us.

There are three ways whereby we get complex ideas : 1. by experience and observation. Thus by seeing two men wrestle, we get the idea of wrestling ;

2. by invention. So he that invented printing had the idea of it in his mind before it existed ; 3. which is the most usual way, by explaining the names of actions we never saw, or notions we cannot see, and thus setting before the mind all the ideas which are the constituent parts of them : for having stored our minds with simple ideas and their names, we can represent to another any complex idea, so that it contains no simple ideas but what he knows and has the name for. Thus the mixed mode, 'lie,' is made of these simple ideas :— 1. articulate sounds ; 2. certain ideas in the mind of the speaker ; 3. those words the signs of those ideas ; 4. the signs put together otherwise than the ideas they stand for are in the mind of the speaker. I need go no farther in the analysis to show that this complex idea is made up of simple ideas. The same may be done with all our complex ideas, which may be resolved into simple ideas, which are the elements of all the knowledge we have.

It is worth observing which of all our simple ideas have had most mixed modes made out of them ; and those have been three ; thinking and motion, which comprehend all action ; and power, from whence those actions are conceived to flow : for action, being the great business of mankind, and the matter about which laws are conversant, it is no wonder that the several modes of thinking and motion should be taken notice of, and have names assigned them, without which laws could but ill be made ; nor could communication be had amongst men, without complex ideas and names to them. Therefore men have settled names and ideas of modes of actions according to their causes, means, objects, time, &c. and also of their powers fitted for those actions, v. g. Boldness is the power to speak or act without fear. When any power has been acquired by frequent doing the same thing, it is called 'habit.' To conclude, let us examine any modes of action, of the mind or of the body, or of both

together, we shall find them but so many collections of simple ideas.

Power being the source of action, the substances wherein powers are, are called causes ; and the simple ideas introduced into any subject by exerting power, are called effects. The efficacy whereby the new idea is produced is called in the subject exerting power, action ; but in the subject wherein the change is produced, passion ; which efficacy in intellectual agents we can only conceive to be modes of thinking ; in corporeal agents, modifications of motion. Whatever sort of action besides these produces any effect, is as remote from my thoughts as the idea of colors from a blind man : and, therefore, many words which seem to express an action, signify nothing but barely the effect. When a countryman says the cold freezes the water, the word 'freezing,' though seeming to import some action, yet signifies nothing but the effect.

I need not remark, that though power and action make the greatest part of mixed modes, yet other simple ideas are not excluded ; nor need I enumerate all the mixed modes which have been settled with names to them. All that is here requisite, is to show what ideas are called mixed modes ; how the mind comes by them ; and that they are compositions of simple ideas ; which, I suppose, I have done.

CHAPTER XXIII.

Of our complex Ideas of Substances.

The mind being furnished with simple ideas, conveyed by the senses or by reflection, takes notice that numbers of these simple ideas go constantly together, which being presumed to belong to one thing, are united by one name, and inadvertently considered as one simple idea : because, not imagining how these simple ideas can subsist by themselves, we suppose

some substratum wherein they subsist, which we call substance.¹

¹ This section, which was intended to show how distinct species of substances came to be looked on as simple ideas, hath been mistaken for an account of the idea of substance in general, and hath been reprehended in these words:—‘ But how comes the general idea of substance to be framed in our minds? Is this by abstracting and enlarging simple ideas? No; but it is by a complication of many simple ideas together; because, not imagining how these simple ideas can subsist by themselves, we accustom ourselves to suppose some substratum wherein they do subsist, and from whence they do result; which, therefore, we call substance. And this is all that is to be said for the being of substance, that we accustom ourselves to suppose a substratum. Is that custom grounded on true reason or not? If not, then accidents or modes must subsist of themselves; and these simple ideas need no tortoise to support them: for figures, colors, &c. would do well enough of themselves but for some fancies men have accustomed themselves to.’

To which objection of the bishop of Worcester, our author answers: ‘ Herein your lordship charges me with two faults: 1. that I make the general idea of substance to be framed, not by abstracting and enlarging simple ideas, but by a complication of many simple ideas together; 2. as if I had said, the being of substance had no other foundation but the fancies of men.

‘ As to the first of these, I say, in more places than one, that general ideas are all made by abstraction, therefore I could not mean that that of substance was made any other way. That I was not speaking of the general idea of substance is manifest from the title of the chapter. In the words quoted, I do not observe that any deny the general idea of substance to be made by abstraction; but speaking of the ideas of distinct substances, I say that they are combinations of simple ideas, looked on as one idea, called by one name of substance though made up of modes, from the custom of supposing a substratum wherein that combination subsists. That my notion of substance in general is different from this, is evident from the following words, where I say, The idea of substance in general is a supposition of we know not what support of such qualities as are capable of producing simple ideas in us.

‘ The other thing laid to my charge, is as if I took the being of substance to be doubtful. To which I answer, that it is of the idea, not of the being of substance that I there speak; and having said that man is a substance, I cannot doubt the being of substance till I doubt my own being. I also say, that sensation convinces us that there are solid substances, and reflection that there are thinking ones. So that the being of substance is not shaken by what I have said, even should the idea of it: nor would it, if I should say we had no idea of it at all; for many things have a being, of which we have no ideas.

So that if any one will examine his notion of pure substance, he will find that he has no idea of it but a supposition of he knows not what support of such qualities which are capable of producing simple ideas in us; which qualities are called accidents. Should any one be asked, what is that wherein color or weight inheres, he would say, the solid and extended parts; and if asked in what solidity and extension inhere, he would be in no better case than the Indian who said that the world was supported by an elephant, and the elephant by a tortoise, and the tortoise by he knew not what. Thus here, as in all cases where we use words without distinct ideas, we talk like children, who being questioned what such a thing is that they know not, answer, Something. The idea then to which we give the name of substance being but the unknown support of qualities, which we imagine cannot subsist without something to support them, we call that support, *substantia*, standing under, or upholding.¹

A relative idea of substance being made, we come

‘The being of substance being safe, let us see whether the idea be not so too. I have said, that we cannot conceive how simple ideas of sensible qualities should subsist alone, and therefore we suppose them to be supported by some common subject, which we denote by the name of substance: which I think is a true reason, because it is the same which your lordship grounds the supposition of a substratum on, in this very page.’

¹ From this paragraph has been raised an objection, as if our author had discarded substance out of the world. To which he replies, ‘This is an accusation that I do not readily know what to plead to. If your lordship means that I deny that there is such a thing as substance, your lordship will acquit me, when you look again into this chapter, where I say, When we think of any sort of corporeal substance, as horse, stone, &c., though the idea we have be but a collection of ideas of sensible qualities, which we find united in the thing so called, yet because we cannot conceive how they should subsist alone, we suppose them supported by some common subject, which we denote by the name of substance, though we have no distinct idea of the thing we suppose or support.’

‘This, and the like fashions of speaking, intimate, that sub-

to have ideas of particular sorts of substances, by collecting combinations of simple ideas which exist toge-

stance is supposed always something, though we know not what it is. Our idea of body, I say, is an extended solid substance; and our idea of soul, a substance that thinks: so long, therefore, as there is body or spirit in the world, I have done nothing towards discarding substance out of the world. Nay, as long as there is any sensible quality left, substance cannot be discarded.

'If your lordship means that I have almost discarded the true idea we have of it, by calling it a *substratum*, a supposition of we know not what support of such qualities as are capable of producing simple ideas in us, &c. I should be glad to be convinced that I have spoken too meanly of it. He that would show me a clearer idea of substance, would do me a kindness. The logicians, who call it *ens per se subsistens et substantia accidentibus*, do but call it a something, they know not what, and may be reckoned with the gentlemen of this new way of reasoning, who have almost discarded substance out of the reasonable part of the world.

'But supposing, that I or these logicians should own that we have but an obscure idea of substance, it would be too hard to charge us with discarding substance out of the world: What 'almost discarding,' and 'reasonable part' signify, I do not clearly comprehend: but let them signify what they will, (for I dare say your lordship meant something by them) would you not think yourself hardly dealt with, if, acknowledging you had but an imperfect idea of God, you should be accused of having almost discarded God out of the reasonable world? I suppose by 'almost discarding out of the reasonable world,' your lordship means something that is blameable; but he, I think, deserves no blame, who acknowledges having an imperfect idea. If it be inferred, that he excludes those things out of being, or out of rational discourse; the first will not hold, for being depends not on our ideas; the latter is no fault, for it is certain, that where we have obscure ideas, we cannot discourse so clearly as if we had distinct ideas.'

To other objections, as to the repetition of the story of the Indian philosopher, and the talking like children, our author replies: 'This repetition, I confess, is a fault in exact writing; but I have excused it in my preface, saying, I am not ignorant how little I herein consult my own reputation, when I knowingly let my Essay go with a fault so apt to disgust the most judicious, who are always the nicest readers:' and there farther add, 'That I did not publish my Essay for such great masters of knowledge as your lordship; but fitted it to men of my own size, to whom repetitions might sometimes be useful.'

'My saying, that when we talk of substance we talk like children, your lordship seems mightily to lay to heart in these words: 'If this be the truth of the case, we must still talk like children,

ther, and are supposed to flow from the unknown essence of that substance. Thus we have ideas of man, gold, water, &c. of which substances we have no other clear idea, than of certain simple ideas existing together. The ordinary qualities of iron make the complex idea of that substance, which a smith knows better than a philosopher, who has no other idea of the

and I know not how it can be remedied. For if we cannot come at a rational idea of substance, we can have no principle of certainty to go on in this debate.' If your lordship has a distincter idea of substance than mine, you are not concerned in what I have there said: but those whose idea of substance is like mine, must with me talk like children, when they talk of something they know not what.'

Farther, the bishop asks, whether there be no difference between the being of a thing and its subsistence by itself? To which our author answers, 'Yes. But how will that prove that, on my principles, we can come to no certainty that there is any such thing as substance? You seem by this question to conclude, that the idea of a thing that subsists by itself is a clear idea of substance. But I ask, is the idea of the manner of subsistence of a thing, the idea of the thing itself? If not, we may have a distinct idea of the manner, and a confused one of the thing.'

'For example, I tell your lordship, that I know a thing which cannot subsist without support, and I know another thing that does subsist without a support. Can you, by having clear ideas of having support and not having support, say that you have a clear idea of the thing which has, and of that which has not, a support? To show a blind man that he has no distinct idea of scarlet, I tell him that his notion that it is a being does not prove that he has a distinct idea of it. He replies, that he knows more than that, v.g. he knows that it subsists in another thing; and, there is no difference, says he, in your lordship's words, between the bare being of a thing, and its subsistence in another. Yes, I say to him, a great deal; but for all that, you have no such clear idea of scarlet as I have, who see and know it, and have another kind of idea of it, besides that of inherence.'

'Your lordship has the idea of subsisting by itself, and you therefore conclude, that you have a distinct idea of the thing that subsists by itself. This is, as if a man should say, he has an idea of a cedar of Lebanon, that it is a tree that needs not a prop; which idea, when he comes to examine it, is but the general one of a tree. Just so is the idea of substance, which is confounded with the general idea of something. But suppose that subsisting by itself gives us a clear idea of substance, how does that prove, that, on my principles, we can come to no certainty that there is any such thing as substance in the world?'

substance than what is framed by a collection of the simple ideas to be found in it. But our complex ideas of substances, besides the simple ideas they are made up of, have the confused idea of something in which they subsist: and when we speak of a substance, we say it is a thing having such or such qualities: body is a thing that is extended, spirit a thing that thinks; these, and the like fashions of speaking, intimate that the substance is supposed to be something besides extension, figure, thinking, &c. though we know not what it is. Hence, when we think of any sort of corporeal substance, as horse, stone, &c. though the idea we have is but a collection of sensible qualities which we find united in the thing so called, yet, because we cannot conceive how they should subsist alone, we suppose them supported by some common subject, which we denote by the name of substance, though we have no distinct idea of the thing we suppose a support.

The same happens concerning the operations of the mind, thinking, reasoning, &c. which we, concluding not to subsist of themselves nor produced by the body, are apt to think the actions of some other substance, called spirit. Having no idea of matter but as something wherein sensible qualities subsist, so by supposing a substance, wherein thinking, knowing, &c. subsist, we have as clear a notion of spirit as of body; the one being the substratum to the simple ideas we have from without, and the other the substratum to the operations we experience within. The idea of corporeal substance is as remote from our apprehensions as that of spiritual substance; and, therefore, from our not having a notion of the substance of spirit we can no more conclude its non-existence, than we can, for the same reason, deny the existence of body.

Whatever be the nature of substance, all the ideas we have of particular substances are but combinations of simple ideas co-existing in such unknown cause of

their union. By such combinations, we represent particular sorts of substances to ourselves; such are the ideas we have, and such by their names do we signify to others. On hearing the words sun, horse, man, &c. every one who understands the language frames a combination of those ideas which he has observed to exist together under that denomination, all which he supposes inherent in an unknown common subject; though every one will find that he has no other idea of any substance, but what he has of the sensible qualities which he supposes to inhere with such substratum. Thus the idea of the sun, what is it but an aggregate of the simple ideas, bright, hot, round, and some others? as he who discourses of it has been more or less accurate in observing its properties: for he has the perfectest idea of any substance who has put together most of those simple ideas which exist in it; among which, for brevity's sake, may be reckoned its active and passive powers. Thus the power of drawing iron is one of the simple ideas of a loadstone, and a power to be drawn is part of the complex one of iron, which powers pass for inherent qualities in those subjects; because every substance being as apt to change some qualities in other subjects, as to produce in us the ideas we receive from it, does by those changes discover to us the powers which mediately affect our senses, as regularly as its sensible qualities do it immediately: v. g. in fire we perceive immediately heat and color, which are in truth but powers to produce those ideas. We perceive the color and brittleness of charcoal, whereby we discover a power in fire to change the color and consistency of wood. These powers, terminating in the alteration of sensible qualities, I have reckoned amongst simple ideas which make the complex ones of the sorts of substances; though, considered in themselves, they are complex ideas: for our senses not enabling us to discover the primary qualities of bodies, on which their real con-

stitutions and differences depend, we are obliged to distinguish them by their secondary qualities, which, as has been shown, are nothing but powers.

The ideas that make our complex ones of corporeal substances are of three sorts : 1. the ideas of primary qualities discovered by our senses, such as bulk, figure, number, situation, and motion of the parts which are in them, whether we take notice of them or not : 2. sensible secondary qualities, which are only powers to produce in us several ideas by our senses : 3. the aptness in any substance to give or receive such alterations, as that the substance so altered should produce in us different ideas from what it did before. These are called active and passive powers ; which, as far as we have any notion of them, terminate in sensible simple ideas.

Powers, therefore, make great part of our complex ideas of substances. In our idea of gold are included its powers of being melted and not consumed ; of being dissolved in aqua regia ; as well as the idea of its color and weight, which are in fact but different powers.

Could we discern the minute particles of bodies, and the constitution on which their sensible qualities depend, they would produce very different ideas in us. Microscopes discover to us, that what to our naked eye produces a certain color, is quite a different thing. So sand or pounded glass, which is white to the naked eye, is pellucid in a microscope. Blood to the naked eye appears red, but a microscope shows only some few globules of red swimming in a pellucid liquor.

Our wise Creator has fitted our senses and faculties for the convenience of life, and the business we have to do here : we are able to examine and distinguish things so as to apply them to our use ; but God, it appears, intended not that we should have a perfect and adequate knowledge of them. We are furnished with faculties to discover enough to lead us to the

knowledge of the Creator and of our duty, and to provide for the convenience of living. But were our senses made much more acute, things would have quite another face to us, and it would be inconsistent with our well being. If our sense of hearing were but 1000 times quicker, a perpetual noise would distract us; were the sense of seeing in any man 1000, or 100,000 times more acute than it now is by the best microscope, he would come nearer to the discovery of the texture and motion of the minute parts of corporeal things, but he would be in a quite different world from other people. Such a quickness and tenderness of sight could not endure open day light. He that was sharp-sighted enough to see the configuration of the minute particles of the spring of a clock, and observe on what its elasticity depends, would discover something very admirable; but if eyes so framed could not at a distance see what o'clock it was, their owner would not be benefited by their acuteness.

And here let me propose an extravagant conjecture, viz. that since we have some reason to imagine that spirits can assume to themselves bodies of different bulk, figure, and conformation, whether an advantage they have over us may not be that they can frame to themselves organs of perception suited to the objects they would consider. For how much would that man exceed others in knowledge who could make his eye capable of every variety of vision! But to us, in our present state, unalterable organs, so contrived as to discover the motion and figure of the minuter parts of bodies, would perhaps be of no advantage. God no doubt has made them so as is best for our present condition.

But to return; our ideas of substances are but a collection of simple ideas considered as united in one thing. Besides the complex ideas we have of material substances, we are able to form the complex idea of an immaterial spirit; and by putting together the

ideas of thinking, perceiving, liberty, and power of moving themselves and other things, we have as clear a notion of immaterial substances as we have of material; the idea of thinking, and moving a body, being as distinct ideas as those of extension, solidity, and being moved: for our idea of substance is equally obscure in both. Every act of sensation gives us an equal view of body and spirit: for whilst I know, by seeing and hearing, that there is a corporeal being without me, I know that there is a spiritual being within me that sees and hears.

After all the familiarity we imagine we have with matter, it will perhaps be found, on examination, that men have no more clear primary ideas belonging to body, than they have belonging to immaterial spirit. The primary ideas we have peculiar to body are cohesion of solid parts, and a power of communicating motion by impulse: the ideas we have peculiar to spirit are thinking and will, or a power of putting body into motion by thought. The ideas of existence, duration, and mobility are common to them both. I attribute mobility to spirit; because, having no other idea of motion but change of distance with other beings, and finding that spirits cannot operate but where they are, and that spirits do operate at several times in several places, I cannot but attribute change of place to all finite spirits.

Every one finds that his soul can operate on his body in the place where that is, but cannot operate on a body at a hundred miles distance. His soul cannot think at Oxford while his body is in London; but, being united to his body, it changes place all the way between London and Oxford, as much as the coach that carries him. If it be said that spirits are not *in loco*, but *ubi*, I suppose that sort of talking will not be of much weight in the present age. But if any one thinks that there is sense in it, let him put it into intelligible English, and draw from it a reason to show

that immaterial spirits are not capable of motion. Motion cannot be attributed to God, not because he is an immaterial, but because he is an infinite spirit.

Let us then compare our idea of body and our idea of spirit, and see whether one be more obscure than the other. If any one say, he knows not what it is that thinks in him, he means he knows not what the substance is of that thinking thing: nor knows he more what the substance is of that solid thing. If he knows not how he thinks, neither knows he how he is extended, how the solid parts of body cohere to make extension. The pressure of the air may account for the cohesion of the parts of matter that are grosser than the particles of air, but will not explain the coherence of the particles of air themselves. But the pressure of any ambient fluid can be no intelligible cause of the cohesion of the solid parts of matter: for though such pressure may hinder the avulsion of two superficies from one another in a line perpendicular to them, yet it cannot hinder the separation in a line parallel to those surfaces; because the ambient fluid, having liberty to succeed each point deserted by a lateral motion, resists such a motion no more than it would resist the motion of that body were it on all sides environed by that fluid, and touched no other body; and therefore, if there were no other cause of cohesion, all parts of bodies must be separable by such lateral motion: so that how clear an idea soever we think we have of the extension of body, he that shall well consider it, may conclude it is as easy to have a clear idea how the soul thinks as how body is extended: for since body is extended by the cohesion of its parts, we shall ill comprehend the extension of body without understanding the cohesion of its parts.

Most people will say, do we not see the parts of bodies stick firmly together? I also say, concerning thinking, do we not every moment experience it in ourselves? The fact is clear; but when we would

consider how it is done, we are at a loss in both cases.

The particles that compose water are so small that no one ever pretended by a microscope to perceive their distinct bulk and figure; and they are so loose as to be easily separated; and yet let but a sharp cold come, they cohere, and are not separable without great force. He that could find the bonds that make these particles stick so close together would discover a great secret, but would not make the extension of body intelligible till he could show wherein consisted the union of those bonds, or of the least particle of matter that exists. Hence it appears that this supposed obvious quality of body is as incomprehensible as any thing belonging to our minds. Furthermore, that pressure which is brought to explain the cohesion of bodies is as unintelligible as the cohesion itself: for if matter be finite, there must be something to hinder it from scattering asunder; and if considered infinite, what light is thereby brought to the cohesion of matter?

Another idea we have of body is the power of communicating motion by impulse; and of our souls the power of exciting motion by thought. But how this is done we know not. In the communication of motion by impulse we have no other conception than of the passing of motion out of one body into another, which is as obscure as, how our minds stop or move our bodies by thought. The increase of motion by impulse is yet harder to be understood: so that however we consider motion, the idea that belongs to spirit is as clear as that which belongs to matter: and if we consider motivity, it is clearer in spirit than body; since two bodies at rest will not afford us the idea of a power to move one another, but by a borrowed motion; whereas mind affords ideas of a power of moving bodies; and perhaps active power is the attribute of spirits, and passive power of bodies.

Hence created spirit, being not separate from matter, is both active and passive. Pure spirit, viz. God, is only active; pure matter is only passive. Be it as it will, we have as clear ideas of spirit as we have of body, the substance of each being equally unknown to us.

To conclude; sensation convinces us that there are solid substances, and reflection that there are thinking ones: experience assures us that the one hath power to move a body by impulse, and the other by thought. Beyond these ideas our faculties will not reach; whence it seems probable that the ideas we receive from sensation and reflection are the boundaries of our thought. So that the idea we have of spirit, compared with the idea we have of body, stands thus: The substance of spirit is unknown to us, and so is the substance of body. Of two primary qualities of body, viz. coherent parts and impulse, we have distinct ideas; so likewise have we clear ideas of two primary qualities of spirit, viz. thinking and a power of action. We have ideas of qualities in bodies, which qualities are but modifications of extension and motion: we have also ideas of believing, doubting, fearing, hoping, which are modes of thinking; we have also ideas of willing and moving the body thereby, for, as has been shown, spirit is capable of motion.

Lastly, if this notion of spirit have some difficulties, we have no more reason therefore to deny the existence of spirit, than we have to deny the existence of body because it is attended with some difficulties: for there is nothing in our notion of spirit more perplexed than the infinite divisibility of matter, involving, whether we grant or deny it, consequences impossible to be explicated. At which we need not wonder; since, having but a few superficial ideas from sensation and reflection, we have no knowledge beyond that, being destitute of faculties to attain it: and therefore, discovering in ourselves knowledge and the

power of motion as we discover in things without extension and motion, we have as much reason to be satisfied with our notion of spirit as with our notion of body: for it is no more a contradiction that thinking should exist independent of solidity, than that solidity should exist independent of thinking: for whensoever we would proceed beyond the ideas we have from sensation and reflection, we fall into darkness and perplexity. But whichever of these ideas be clearest, that of body or of spirit, it is evident that the ideas that make them up are from sensation and reflection; so of all our other ideas, even of God himself. For if we examine the ideas we have of God and separate spirits, we shall find, that they are made up of the simple ideas we receive from reflection; v. g. having got the ideas of existence and duration, of knowlege and power, of pleasure and happiness, and several other qualities, we enlarge these with the idea of infinite, and so make our complex idea of God.

If I find that I know some things, I can frame an idea of knowing twice as many, which I can double again and again, and thus enlarge my idea of knowlege by extending its comprehension to all things, and can thus frame the idea of infinite knowlege. The same also may be done of power and of duration; all which is done by enlarging the simple ideas we have from sensation and reflection. For it is infinity, joined to our ideas of existence, power, knowlege, &c. which makes our complex idea of God. For though in his essence God may be uncompounded, yet we have no other idea of him, but a complex one of existence, knowlege, power, &c. infinite and eternal, which are all distinct ideas, and some of them compounded of others. This is farther to be observed; that there is no idea we attribute to God, except infinity, which is not also part of our complex idea of other spirits; because being capable of no other ideas but those which we receive from the operation of our minds, we can

attribute to spirit no other but what we receive from thence ; all the difference is in the extent of the attributes : for that in our ideas of spirits, we are restrained to those we receive from sensation and reflection, is evident from hence, that in our ideas of spirits, we cannot conceive of the manner in which they communicate their thoughts to each other. Having no experience of immediate communication, we can have no idea how spirits, which use not words, can communicate their thoughts.

Having thus seen what kind of ideas we have of substances, wherein they consist, and how we come by them, it is evident, 1. that our ideas of substances are only collections of simple ideas, with a supposition of something in which they subsist, of which something we have no distinct idea : 2. that all the simple ideas which make up our complex ones are such as we have received from sensation or reflection, even those which seem most remote from all we have to do with ; as is evident in the complex ideas we have of angels, and even of God himself : 3. that most of these simple ideas are powers, though we are apt to take them for qualities.

CHAPTER XXIV.

Of collective Ideas of Substances.

Besides the complex ideas of single substances, as of man, horse, gold, &c. the mind has complex collective ideas of substances, made up of many particular substances united into one idea, v. g. the idea of an army, though consisting of a great number of distinct substances, is as much one idea, as the idea of a man.

These collective ideas the mind makes by uniting several simple or complex ideas into one, as it makes complex ideas of particular substances by an aggregate of simple ideas : and as by repeated ideas of unity it makes a score or a gross, by putting together

several particular substances, it makes a collective idea, as of a troop, an army, a fleet. Nor is it harder to conceive how an army of ten thousand men should make one idea than how a man should make one idea; it being as easy to unite the idea of a number of men as to unite the distinct ideas that make up the composition of a man. Amongst such collective ideas are to be reckoned most artificial things; and if we consider collective ideas aright, they are but the artificial draughts of the mind, bringing remote and independent things into one view, and signifying them by one name.

CHAPTER XXV.

Of Relation.

Besides the ideas the mind has of things, there are others it gets from their comparison one with another. The understanding, in the consideration of any thing, can look beyond it to see how it stands in conformity to any other.

When the mind sets one thing by another, and carries its view from one to the other, this is 'relation' and 'respect;' and the denominations intimating that respect, and leading the thoughts beyond the subject denominated to something distinct from it, are called 'relatives,' and the things so brought together, 'related.' Thus when I consider Caius as a man, I have nothing in my mind but the complex idea of the species, man; but when I give him the name of husband, I intimate some other person, and there are two things brought into consideration.

These relations, expressed by relative terms that have others answering them, as father and son, bigger and less, are obvious to every one: but where languages have failed to give correlative names, the relation is not so easily taken notice of. Concubine is a relative name; but in languages where this and like

words have not a correlative turn, people are not so apt to take them to be so. Hence, many names which include relations, have been called external denominations. But all names must either signify some idea which is in the thing to which the name is applied, and then it is positive; or else it arises from the respect the mind finds in it to something distinct from it, and then it includes relation.

Another sort of relative terms there is, which are not looked on as relative, or even as external denominations, which, under the appearance of something absolute, contain a tacit relation, as old, great, imperfect, &c.

This farther may be observed, that the ideas of relation may be the same in men who have different ideas of the things related; v. g. those who have far different ideas of man, may agree in the notion of father. The nature of relation consists in comparing two things, from which comparison one or both comes to be denominated; and if either be removed, the relation ceases: v. g. Caius, whom I consider to-day as father, ceases to be so to-morrow by the death of his son, without any alteration made in himself. By the mind's changing the object to which it compares any thing, the same thing is capable of having contrary denominations at the same time; v. g. Caius, compared to several persons, may be said to be older, younger, weaker, stronger, &c.

Whatever can be considered as one thing is positive: and so not only simple ideas, but modes also, are positive beings, though their parts are relative. A picture, though an aggregate of divers parts, is a positive idea. So of a family, a tune, &c. for there can be no relation but betwixt two things considered as two things.

Concerning relation these things may be considered: 1. there is no one thing which is not capable of an almost infinite number of considerations

in reference to other things; and therefore this makes no small part of men's thoughts and words; v. g. one man may sustain the following relations, and many more, viz. father, brother, son, grandfather, grandson, son-in-law, friend, enemy, husband, subject, general, superior, inferior, &c. to an almost infinite number; being capable of as many relations as there can be occasions of comparing him to other things: 2. this farther may be considered concerning relation; that the ideas which relative words stand for are often more distinct than of those substances to which they belong. The notion we have of father or brother is clearer than that we have of man; for the knowledge of one simple idea is often sufficient to give the notion of relation; but to the knowledge of any being a collection of sundry ideas is necessary. The ideas then of relations are capable of being more distinct in our minds, than those of substances, because it is hard to know all the simple ideas which are in any substance, but for the most part easy to know the simple ideas that make up any relation. It is easy to frame the idea of brothers without having the perfect idea of man. It suffices for the precise idea of the relative term to have a clear conception of that which is the foundation of the relation; 3. though there be a great number of considerations wherein things may be compared, yet they all terminate in the simple ideas of sensation or reflection, even in those relations that seem to be most remote from sense or reflection; 4. relation being the considering of one thing with another, all words which lead the mind to other ideas than those which exist in the thing mentioned, are relative words; v. g. man, black, merry, thoughtful, &c. are absolute words; but father, brother, king, blacker, merrier, &c. are words which imply something exterior to the thing they denominate.

I shall now proceed to show how the ideas of relation are made up only of simple ideas, how remote so-

ever from sense they seem. I shall begin with the most comprehensive, wherein all things are concerned, and that is the relation of cause and effect.

CHAPTER XXVI.

Of Cause and Effect, and other Relations.

In our notice of things, we cannot but observe that several, both qualities and substances, begin to exist; and that they receive this existence from the operation of some other being. That which produces we call cause, and that which is produced effect. Thus, finding in wax fluidity produced by the application of heat, we call heat the cause, and fluidity the effect. So also finding wood, by the application of fire, turned into a substance called ashes, i. e. a collection of simple ideas, quite different from the complex idea we call wood;—we consider fire the cause, and ashes the effect.

Having thus got the notion of cause and effect, viz. that cause is that which makes any other thing begin to be, and effect is that which had its beginning from some other thing; we easily distinguish the originals of things into two sorts.

1. When the thing is wholly new, so that no part of it existed before, this we call creation.

2. When a thing is made up of particles which existed before, but that thing so constituted had not any existence before, as this man, this egg, rose, cherry, &c. this, when referred to a substance produced in the ordinary course of nature, by an internal principle working by insensible ways, we call generation: when the cause is extrinsical, and the effect produced by a sensible separation or juxtaposition of discernible parts, we call it making; when a simple idea is produced which was not in the subject before, we call it alteration. Thus a man is generated, a picture is

made, and either of them altered, when any new idea is produced in either of them which was not there before. In which cases we may observe that the notion of cause and effect has its rise from ideas received by sensation and reflection.

Time and place are foundations of large relations ; but having already shown how we get these ideas, it may suffice to intimate that most of the denominations of things received from time are only relations. When it is said that Queen Elizabeth reigned 45 years, it is meant that the duration of her government was equal to 45 annual revolutions of the sun.

There are other words of time thought to stand for positive ideas, which, when considered, will be found to be relative, such as young, old, &c. which intimate the relation any thing has to a certain length of duration. Thus, considering the ordinary duration of man to be 70 years, we say a man is young when his age is but a small part of that : it is but comparing the particular duration of this or that man with the idea of the duration ordinarily belonging to man ; which is evident from the application of these names to other animals ; for a man is young at 20, and a horse is old at 20 : but the sun and stars we call not old, because we know not the period God hath set to that sort of beings.

The relation that things have to one another in place is very obvious, as above, below, &c. But as in duration, so in extension, some ideas are relative, which we signify by names that are thought positive, as 'great' and 'little' are truly relations. For having settled in our minds the ideas of the bigness of several species of things, we make that the standard ; so that will be a great horse to a Welshman which is but a little one to a Fleming ; they having been accustomed to different breeds, in relation to which they denominate their great and little.

So likewise weak and strong are relative denomina-

tions of power. By a weak man we mean one who has not so much power as men usually have. When we say the creatures are weak things, we signify the disproportion there is in the power of God and the creatures. So abundance of words in ordinary speech stand only for relations, which at first sight seem to have no such signification : v. g. The ship has necessary stores. These are relative words ; one having relation to the voyage intended, and the other to future use. All which relations are derived from sensation and reflection.

CHAPTER XXVII.

Of Identity and Diversity.

Another occasion the mind takes of comparing is, when, considering any thing as existing at any time and place, we compare it with itself existing at another time, and thence form the ideas of identity and diversity. When we see any thing in any place at any instant of time, we are sure that it is that very thing, and not another : and in this consists identity, when the ideas it is attributed to vary not from what they were that moment, wherein we consider their former existence, and to which we compare the present : for, not conceiving it possible that two things should exist in the same place at the same time, we conclude that whatever exists is there itself alone. When we demand whether any thing be the same or no, it refers to something that existed such a time in such a place ; which it was certain was the same with itself, and no other : whence it follows that one thing cannot have two beginnings, nor two things one beginning ; that, therefore, which had one beginning is the same, and that which had a different beginning is not the same.

We have ideas but of three sorts of substances :—
1. God ; 2. finite intelligences ; 3. bodies. 1. God is

without beginning, eternal and unalterable, and concerning his identity there can be no doubt: 2. finite spirits having had each its determinate time and place of beginning to exist, the relation to that time and place will determine to each its identity: 3. the same will hold of every particle of matter, to which no addition or subtraction being made, it is the same: for though these substances do not exclude one another out of the same place, yet they must exclude any of the same kind out of the same place; or else the notions of identity and diversity would be in vain, and there could be no distinction of substances one from another: for could two bodies be in one and the same place at the same time, they must be one and the same: but it being a contradiction that two or more should be one, identity and diversity are ways of comparing, useful to the understanding. All modes or relations terminating in substances, the identity and diversity of them too will be in the same way determined. As to things whose existence is in succession, v. g. motion and thought, concerning their diversity there can be no question; because, each perishing the moment it begins, they cannot exist in different times or in distant places.

From what has been said it is easy to discover the *principium individuationis*: existence itself determines a being to a time and place incommunicable to two beings of the same kind. Suppose a body, under one immutable superficies, existing in a determined time and space; considered in any instant, it is in that instant the same with itself, and so must continue as long as it exists. In like manner, if two or more atoms be joined in the same mass, every one will be the same by the same rule: and, while they continue united, the mass will be the same mass. But let one atom be taken away, or a new one added, it is no longer the same body. The identity of living creatures depends not on the same particles, but on some-

thing else. An oak, growing from a plant to a great tree, and then lopped, is the same oak; and a colt, grown up to a horse, is the same horse, though, in these cases, there be a change in the parts. We must consider, therefore, wherein an oak differs from a mass of matter. It seems to be in this;—the one is the cohesion of particles any how united; the other, such an organisation of parts as is fit to receive and distribute nourishment, so as to frame wood, bark, leaves, &c. in which consists vegetable life. That being one plant, it continues to be the same plant as long as it partakes of the same life, though that life be communicated to new particles of matter: for this organisation being at any one instant in any one collection of matter, is that individual life which, existing in the same continuity of insensibly succeeding parts, has that identity which makes the same plant, and all the parts of it, parts of the same plant while they exist united in that organisation. The case is the same in brutes. Something like this we have in machines. For example, what is a watch? It is an organisation of parts to a certain end. If we would suppose this machine one continued body, whose parts were repaired by addition or separation of insensible parts with one common life, we should have something like an animal, with this difference; that in an animal the organisation and the life begin together; but in machines, the force coming from without, is often away when the organ is fitted to receive it.

This also shows wherein the identity of the same man consists, viz. in participation of the same continued life by particles of matter successively united to the same organised body. He that shall place the identity of man in any thing else will find it hard to make an embryo and one in years the same man by any supposition, that will not make it possible for Socrates, Pilate, and St. Austin to be the same man: for if identity of soul make the same man, and if it be

possible for the same spirit to be united to different bodies, men living in distant ages may have been the same man.

To conceive aright of identity we must consider what idea the word it is applied to stands for ; it being one thing to be the same substance, another the same man, and a third the same person, if person, man, and substance stand for three different ideas.

An animal is a living organised body : and consequently the animal is the same continued life communicated to different particles united to that body. The idea in our minds, of which the word man is the sign, is of an animal of a certain form. Whoever should see a creature of his own shape and make, though it had no more reason than a cat or a parrot, would still call him a man ; and whoever should hear a cat or a parrot discourse or philosophise would think it nothing but a cat or parrot, and would say that the one was a dull, irrational man, the other a very intelligent parrot.

A relation we have in an author of great note, is sufficient to countenance the supposition of a rational parrot. His words are,

‘ I had a mind to know from Prince Maurice’s own mouth, the account of a common, but much credited story, that I had heard so often from many others, of an old parrot he had in Brazil, during his government there, that spoke, and asked, and answered common questions like a reasonable creature ; so that those of his train there generally concluded it to be witchery or possession ; and one of his chaplains, who lived long afterwards in Holland, would never, from that time, endure a parrot, but said, they all had a devil in them. I had heard many particulars of this story, and assevered by people hard to be discredited, which made me ask Prince Maurice what there was of it ? He said, with his usual plainness and dryness in talk, there was something true, but a great deal false, of

what had been reported. I desired to know of him what there was of the first? He told me short and coldly, that he had heard of such an old parrot when he had been at Brazil; and though he believed nothing of it, and it was a good way off, yet he had so much curiosity as to send for it; that it was a very great and a very old one; and when it came first into the room where the prince was, with a great many Dutchmen about him, it said presently, 'What a company of white men are here!' They asked it what it thought that man was? pointing at the prince. It answered, 'Some general or other.' When they brought it close to him, he asked it, *D'ou venez vous?* 'Whence come ye?' It answered, *De Marinnan*, 'From Marinnan.' The prince, *A qui estes-vous?* 'To whom do you belong?' Parrot, *A un Portugais*, 'To a Portuguese.' Prince, *Que fais-tu là?* 'What do you there?' The parrot, *Je garde les poules*, 'I look after the chickens.' The prince laughed, and said, *Vous gardez les poules?* 'You look after the chickens?' The parrot answered, *Oui, moi; et je sais bien faire*, 'Yes, I; and I know well enough how to do it;' and made the chuck, four or five times, that people use to make to chickens when they call them. I set down the words of this worthy dialogue in French, just as Prince Maurice said them to me. I asked him in what language the parrot spoke? and he said in Brazilian. I asked whether he understood Brazilian? he said, No: but he had taken care to have two interpreters by him, the one a Dutchman that spoke Brazilian, and the other a Brazilian that spoke Dutch; that he asked them separately and privately, and both of them agreed in telling him just the same thing that the parrot had said. I could not but tell this odd story, because it is so much out of the way, and from the first hand, and what may pass for a good one; for I dare say this prince, at least, believed himself in all he told me, having ever passed for a very honest and pious man.

I leave it to naturalists to reason, and to other men to believe, as they please, on it; however, it is not, perhaps, amiss to relieve or enliven a busy scene sometimes with such digressions, whether to the purpose or no.'

To find wherein personal identity consists, we must consider what person stands for; which, I think, is a thinking intelligent being that can consider itself the same in different times and places, which it does by the consciousness inseparable from thinking: for since consciousness always accompanies thinking, it is that which makes every one to be what he calls self. In this alone consists personal identity, i. e. the sameness of rational being: and as far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person.

But it is farther inquired, whether it be the same identical substance. This few would doubt of, if their perceptions always remained present in their minds; but the difficulty is, that the consciousness being interrupted by forgetfulness, even the best memories losing sight of one part while viewing another, and we sometimes, not reflecting on our past selves, being intent on our present thoughts, and in sound sleep having no thoughts at all; in these cases our consciousness being interrupted, doubts are raised whether we are the same thinking substance or no, which concerns not personal identity at all; the question being, what makes the same person, and not whether it be the same substance which always thinks in the same person; different substances by the same consciousness being united into one person, as well as different bodies by the same life are united into one animal whose identity is preserved by the unity of one continued life. As far as any intelligent being can repeat the idea of any past action with the same consciousness it had of it at first, and as it has of any present action, so far it is the same personal self; the same conscious-

ness uniting those distant actions in the same person, whatever substances contributed to their production.

That this is so, we have evidence in our very bodies, whose particles, while united to this thinking self, so that we are conscious of good or harm to them, are a part of ourselves. Thus the limbs of his body are to every one part of himself. Cut off a hand, and it is no longer part of himself. Thus we see that the substance, whereof personal self consisted at one time, may be varied at another without change of personal identity.

But if the substance which thinks be changed, can it be the same person ; or, remaining the same, can it be different persons ?

I answer, This can be no question to those who place thought in purely material substance ; for they conceive personal identity preserved in something else than identity of substance. And those who place thinking in an immaterial substance only, must show why personal identity cannot be preserved in the change of immaterial substances as well as animal identity is preserved in the change of material substances.

But next, as to the first part of the question, whether, if the thinking substance be changed, it can be the same person ; that can only be resolved by those who know what kind of substances they are that think, and whether the consciousness of past actions can be transferred from one thinking substance to another. I grant, were the same consciousness the same action, it could not ; but it being but a representation of a past action, it will remain to be shown why that which never was may not be represented to the mind to have been : and therefore how far consciousness of past actions is annexed to any individual, so that another cannot have it, will be hard to determine, till we know what kind of action it is, that cannot be done without a reflex act of perception accompanying it, and how

performed by thinking substances who cannot think without being conscious of it. But that which we call the same consciousness, not being the same individual act, why one intellectual substance may not have represented to it, as done by itself, what it never did, and was perhaps done by some other agent ; why such representation may not possibly be without reality of matter of fact, as well as several representations in dreams are, which yet, whilst dreaming, we take for true, will be difficult to conclude from the nature of things : and that it never is so will be best resolved into the goodness of God, who will not, by an error of his creatures, transfer from one to another the consciousness which draws reward or punishment with it. But to return ; if the same consciousness can be transferred from one thinking substance to another, it will be possible that two thinking substances may make but one person.

As to the second part of the question, Whether the same substance remaining, there may be two distinct persons ? which seems to be built on this, Whether the same being may be stripped of the consciousness of its past existence, and begin a new account from a new period ; all who hold pre-existence are of this mind, for they allow the soul to have no consciousness of what it did in that pre-existent state. Suppose a Christian Platonist or Pythagorean should think his soul had existed ever since the creation, and had revolved in many human bodies, as I once met with one who was persuaded his had been the soul of Socrates ; would any one say that he being not conscious of any of Socrates's thoughts, could be the same person with Socrates ? Let any one conclude that he has an immaterial spirit which keeps him the same, and is that which he calls himself : let him also suppose it to have been the same that was in Nestor ; but having now no consciousness of any of the actions of Nestor, can he conceive himself the same person with him ? So

that this consciousness not reaching to the actions of that other man, he is no more one self with him, than if the spirit that now informs him began to exist when it began to inform his present body ; the same immaterial substance without the same consciousness, no more making the same person by being united to any body, than the same particle of matter, without consciousness united to any body, makes the same person. And thus we may conceive the same person at the resurrection though in a different body, the same consciousness going along with the soul that inhabits it. But the soul alone would scarcely to any one, but to him who makes the soul, be enough to make the same man. For should the soul of a prince, with the consciousness of the prince's past life, enter the body of a cobbler as soon as deserted by his own soul, he would be the same person with the prince ; but who would say that he was the same man ? The body too goes to the making the man, and would to every body determine the man in this case, who would be the same cobbler to every one besides himself. The same man and the same person ordinarily stand for the same thing ; but when we would inquire what makes the same spirit, man, or person, we must fix the idea of spirit, man, or person in our mind ; and having resolved the meaning of them, it will be easy to determine, in either, when it is the same, and when not.

But though the same soul does not make the same man, yet consciousness, as far as ever it can be extended, unites existences and actions into the same person ; so that whatever has the consciousness of present and past actions, is the same person to whom they both belong.

Self is that conscious thinking thing, which is capable of happiness or misery, and is concerned for itself as far as that consciousness extends. Whilst comprehended under that consciousness, the little finger is as much part of itself, as what is most so ;

and on separation of this finger, should consciousness go along with it, leaving the rest of the body, this little finger would be the person, and self would have nothing to do with the rest of the body. That with which the consciousness of this present thinking thing can join itself makes the same person, and is one self with it, and with nothing else.

In this personal identity is founded all the justice of reward and punishment; and this may show us that personal identity consists not in the identity of substance, but in the identity of consciousness; wherein if Socrates and the present mayor of Queenborough agree, they are the same person. If Socrates waking and sleeping do not partake of the same consciousness, Socrates waking and sleeping is not the same person.

It will possibly be objected; Suppose I lose the memory of some parts of my life, am I not the same person that did those actions and had those thoughts, though I have now forgot them? To which I answer, we must here take notice what the word 'I' is applied to; which in this case is the man only: and the same man being presumed to be the same person, 'I' is supposed here to stand for the same person. But if it be possible for the same man to have distinct consciousness at different times, the same man would at different times make different persons, which we see is the sense of mankind; human laws not punishing the madman for the sober man's actions, nor the sober man for what the madman did.

But it is hard to conceive that Socrates, the same individual man, should be two persons. To help us a little, we must consider what is meant by the same individual man. 1. It must be the same individual thinking substance; 2. or the same animal, without regard to soul; 3. or the same spirit united to the same animal. Taking any one of these suppositions, it is impossible to make personal identity consist in any thing but consciousness. By the first of them it

must be allowed possible that a man born of different mothers, and in distant times, may be the same man ; a way of speaking which admits it possible for the same man to be two distinct persons. By the second and third, Socrates in this life and after it cannot be the same man any way, but by the same consciousness. But whatever to some men makes a man, and consequently the same individual man, personal identity can be placed in nothing but consciousness, without involving the greatest absurdities.

But is not a man drunk and sober the same person ? Why else is he punished for what he commits when drunk, though he be not afterwards conscious of it ? as a person who walks in his sleep is answerable for any mischief he may do in it. Human laws punish according to their knowledge, because they cannot distinguish what is real and what is counterfeit : and they justly punish the drunkard, because the fact is proved against him, but want of consciousness cannot be proved for him.

Nothing but consciousness can unite remote existences into the same person : the identity of substance will not do it ; for in substance without consciousness there is no person. Could we suppose two distinct consciousnesses acting on the same body alternately, and on the other side the same consciousness acting by intervals on two distinct bodies, in the first case there would be two distinct persons, and in the second one person in two distinct bodies, as one man in two clothings. It matters not to say that this same and this distinct consciousness is owing to the same and distinct immaterial substances, since personal identity would equally be determined by consciousness whether that consciousness were annexed to some immaterial substance or no. For granting the thinking substance to be immaterial, it may part with its consciousness and be restored to it again, as appears in the forgetfulness of past actions, and in the recovery

of consciousness after a long interval. Make the intervals of memory and forgetfulness take their turns regularly, and you have two persons with the same spirit, as in the former instance two persons with the same body. So self is not determined by identity of substance, but by identity of consciousness.

It may conceive the substance of which it is now made up to have existed formerly, united in the same conscious being ; but consciousness removed, that substance is no more itself than any other substance, as is evident in the instance already given of a limb cut off. In like manner it will be in reference to any immaterial substance ; if there be any part of its existence which I cannot join with the present consciousness, whereby I am now myself, it is in that part of its existence no more myself than any other immaterial being.

I agree, the more probable opinion is, that this consciousness is annexed to one individual immaterial substance. Be that as it may, every intelligent being must grant, that there is something that is himself that he is concerned for ; that this self has existed more than one instant, and may exist months and years to come, and may, by the same consciousness, be continued on for the future. In which account, numerical substance is not considered as making the same self ; but the same continued consciousness.

Person, as I take it, is the name for this self : it is a forensic term, appropriating actions and their merit ; and belongs only to intelligent agents capable of a law. This personality extends to the past by consciousness, whereby it imputes to itself past actions on the same ground as it does the present. All which is founded in a concern for happiness, the unavoidable concomitant of consciousness ; and, therefore, whatever past actions it cannot appropriate to that present self, it cannot be concerned in : and to receive pleasure and pain on account of any such action, is the

same as to be made happy or miserable without any demerit at all; and, therefore, the apostle tells us, that at the great day, when every one shall receive according to his doings, the secrets of all hearts shall be laid open.

In treating of this subject, I have made some suppositions that will look strange to some readers; but they are pardonable in this ignorance we are in of the nature of the thinking thing that is within us. Did we know what it was, and whether it could perform its operations out of body, and whether it has pleased God that no one such spirit shall ever be united to any but one such body, on the right organisation of which its memory should depend, we might see the absurdity of some of the suppositions I have made. But taking the soul of man for an immaterial substance, independent from matter, there can be no absurdity in supposing, that the same soul may, at different times, be united to different bodies.

To conclude; whatever substance begins to exist, it must, during its existence, be the same: whatever compositions of substances begin to exist, during the union of those substances, the concrete must be the same: whatever mode begins to exist, during its existence, it is the same; whereby it will appear, that the difficulty rather arises from the names ill used, than from any obscurity in the things themselves.

For, supposing a rational spirit to be the idea of a man, it is easy to know what is the same man, viz. the same spirit. Supposing a rational spirit vitally united to a body to make a man, while that spirit remains united, though with a fleeting successive body, it will be the same man: but if the idea of a man be the vital union of parts in a certain shape, as long as that union remains, it will be the same.¹

¹ This doctrine of identity and diversity the bishop of Worcester pretends to be inconsistent with the Christian doctrine of the resurrection of the dead. He says, 'The reason of believing the

CHAPTER XXVIII.

Of other Relations.

Besides the before-mentioned relations, there are infinite others, some whereof I shall mention.

resurrection of the same body, on Mr. Locke's grounds, is from the idea of identity.' To which our author answers: 'The reason of believing any article of the Christian faith is its being a part of divine revelation. On this ground I believed it before I ever thought of those propositions, and not from my idea of identity. But I thought that you undertook to make out that my notion of ideas was inconsistent with this article of the Christian faith: The resurrection of the dead I acknowledge to be an article of the Christian faith; but that the resurrection of the same body is so, I confess I do not yet know. In the New Testament our Saviour and the apostles preach the resurrection of the dead, but I do not remember in the New Testament any such expression as the resurrection of the body, where the general resurrection is spoken of; but where the resurrection of some particular persons, on our Saviour's resurrection, is mentioned, the words are, 'Many bodies of the saints which slept arose;' of which way of speaking a reason is given in these words, 'appeared to many,' i. e. those who slept appeared, so as to be known to be risen. It was necessary that they should come in such bodies as might appear to be the same they had before, that they might be known to those to whom they appeared; and it is probable that their bodies were not yet dissolved; and therefore it is particularly said here, differently from what is said of the general resurrection, that their bodies arose.

'But your lordship endeavors to prove it must be the same body. Granting that you have proved that it must be, will you say that he holds what is inconsistent with an article of faith, who having never seen your lordship's reasons, believes what the Scriptures propose to him, viz. That the dead shall be raised, without determining whether it shall be with the same bodies or no? Your lordship argues it must be the same body, which as you explain it is not the same particles of matter which were united at the point of death, or that the sinner had at the time of his sin; but the same material substance which was vitally united to the soul here; i. e. as I understand it, the same particles which were some time or other united to his soul during the present life.

'Your first argument is from the words, 'All that are in the graves shall hear his voice,' &c. Whence you argue, that this cannot only be said of what was united to the soul in life, because a different substance cannot be said to be in the graves and to come out of them. According to this, the soul, unless it be in the grave, will make no part of the person that is raised, unless, as your lordship argues against me, you can make it out, that a sub-

1. The first I shall name is some one simple idea, which being capable of degrees, affords an occasion of

stance, which never was in the grave, can come out of it, or that the soul is no substance. This interpretation, also, is not easily reconciled to your saying, you do not mean by the same body the same individual particles which were united at the point of death; yet you can mean no other, because you say that no substance can come out but what was in the grave. Your lordship expressly says, that our Saviour's words are to be understood of the substance of that body to which the soul was at any time united, and not to those individual particles that are in the grave: which being put together, seems to me to say, that our Saviour's words are to be understood of those particles only that are in the grave; and not of those particles only which are in the grave, but of others also, which have at any time been vitally united to the soul, but never were in the grave.

Your lordship next quotes the words of St. Paul: 'For we must all appear before the judgment-seat of Christ, that every one may receive the things done in his body,' &c. 'To which your lordship subjoins the question, Can these words be understood of any other material substance, but that body in which these things were done? Answer, St. Paul does not say he shall have the same body when he suffers that he had when he sinned. The body which he had at fifteen was his body, so was the body which he had at fifty, but it was not the same body. He that at threescore is broken on the wheel for a murder he committed at twenty, is punished for what he did in his body, though the body he has, is not the same individual body that he had forty years ago.

But to your lordship's farther question, Can these words be understood of any other material substance but that body in which these things were done? I answer, they may, because your lordship says, That you do not say the same particles of matter, which the sinner had at the very time of the commission of his sins, shall be raised at the last day. And your lordship gives this reason for it: For then a long sinner must have a vast body, considering the continual spending of particles by perspiration. Now, if the apostle's words cannot be understood of any other material substance but that body in which these things were done; and no body, on the change of some particles, is the same body; it follows that either the sinner must have all the same particles united to his soul when he is raised that he had united to his soul when he had sinned, or else the words cannot be understood to mean the same body in which the things were done.

Your lordship thinks it suffices to make the same body, to have, not all, but no other particles of matter but such as were sometime united to the soul. But such a body is no more the same body, than that is the same body in which half or three quarters of the same particles that made it up, are wanting. For example, a sinner has lived a hundred years. What must his

comparing the subject wherein it is, to another, in respect of that simple idea; v. g. whiter, sweeter,

body at the resurrection consist of? Not of all the particles that were ever united to his soul; for that, your lordship says, would make the body too vast: it suffices that it consists of some of the particles that were united to the soul during life, and none others. But, according to this account, his body at the resurrection will be no more the same body in which things were done in the distant parts of his life, than that is the same body in which half or three quarters of the individual matter that made it up then is now wanting.

‘Again, your lordship says, that you do not say that the same individual particles shall make up the body at the resurrection, which were united at the point of death, for there must be a great alteration and attenuation of them in a lingering disease: because your lordship thinks these particles of a wasted body too few for such a vigorous body as your lordship proportions out in your thoughts to men at the resurrection; and therefore some portion of the particles formerly united to the soul shall be re-assumed, but not all, to avoid making his body too vast. But, pray, my lord, what must an embryo do, who, dying soon after the soul is united to the body, has no particles of matter to make up his body to the size which your lordship seems to require in bodies at the resurrection?’

‘By these and a few other like consequences, one may see what service they do to religion who make articles of faith about the resurrection of the same body, where the Scripture says nothing, or if it does it is with a reprimand. 1 Cor. xv. 35, &c. It suffices that the dead shall be raised. He that believes this must be acquitted from being guilty of anything inconsistent with the article of the resurrection of the dead.’

‘But your lordship asks, How could it be said, if any other substance be joined to the soul at the resurrection, as its body, that they were the things done in or by the body? Answer, Just as it may be said of a man, at a hundred years old, that the murder or drunkenness he was guilty of at twenty, were things done in the body.’

‘Your lordship adds, And St. Paul’s dispute about the manner of raising the body might soon have ended, if there were no necessity of the same body. Answer, When I understand what argument there is in these words to prove the resurrection of the same body, I shall know what to say to it.’

‘The next text of Scripture you bring for the same body is, ‘If there be no resurrection of the dead, then is Christ not raised;’ from which your lordship argues, It seems then other bodies are to be raised as his was. Other dead are as certainly raised; but I see not how it follows that they shall be raised with the same body: for if other bodies are raised as his was, then every man shall be raised with the same lineaments he had

bigger, &c. These relations may be called proportional.

at the time of his death, even with his wounds yet open, if he had any.

'The case I think far different betwixt our Saviour and those to be raised at the last day: 1. His body saw not corruption: to give him then another body, had been to destroy his body, and to frame a new one without need. But why with the remaining particles of a man's body long since mouldered into dust, other new particles, mixed with them, may not serve to make his body again, as well as the mixture of new particles of matter did, in the compass of his life, make his body, no reason can be given; since whatever matter is vitally united to his soul is his body as much as is that which was united to it when he was born. 2. The figure and lineaments of our Saviour's body, even to his wounds, were to be kept in his raised body to be a conviction to his disciples. But at the last day, when all men are raised, there will be no need to be assured of any one particular man's resurrection: it is enough that every one shall appear before the judgment-seat of Christ, to receive according to what he had done in his former life.

'Your lordship asks, Were they, who saw our Saviour after his resurrection, witnesses only of some material substance then united to his soul? I beg your lordship to consider whether our Saviour was known to be the same man by his soul that could not be seen, or by his body that could be seen. But because one man cannot know another but by outward visible lineaments, will your lordship argue that the great Judge shall not be able to know who is who, unless he gives to every one of them a body of the same figure and particles he had in his former life?

'But your lordship farther says that the apostle insists on the resurrection of Christ, not merely as an argument of the possibility of ours, but of the certainty of it. Answer, No doubt the resurrection of Christ is a proof of the certainty of our resurrection; but it is not therefore a proof of the resurrection of the same body.

'Your lordship quotes St. Paul, 'But some men say, How are the dead raised, and with what body do they come?' He then shows, you say, that the seminal parts of plants are wonderfully improved by the ordinary providence of God, in the manner of their vegetation. Answer, I do not understand what it is for the seminal parts of plants to be wonderfully improved by the ordinary providence of God in the way of vegetation, or I should better see how this tends to the proof of the resurrection of the same body. It continues, 'They sow bare grain of wheat or some other grain; but God giveth it a body,' &c. Here, says your lordship, is an identity of the material substance supposed. To me it appears that a diversity of substance is supposed: for St. Paul saith, 'That which thou sowest, thou sowest not that body that shall be.' From which the argument seems to stand thus:

2. Another occasion of comparing things together is their origin, which being not afterwards to be alter-

If the body that is put in the earth in sowing is not that body that shall be, then the body that is put in the grave is not the same body that shall be.

But your lordship proves it to be the same body by the Greek words *τὸ ἴδιον σῶμα*, which you translate, that proper body which belongs to it. Answer, By those words I formerly understood that in the production of wheat and other grain from seed God continued every species distinct. Your lordship says, These words prove that to every plant of wheat, and to every grain of wheat produced in it, is given the proper body that belongs to it, which is the same body with the grain that was sown. Answer, I do not understand how one individual grain can be the same with twenty, fifty, or a hundred grains. But your lordship proves it by saying, Every seed has that body in little which is afterwards so much enlarged; and in grain the seed is corrupted before its germination; but it hath its proper organical parts which make it the same body with that which it grows up to. For although grain be not divided into lobes, as other seeds are, yet it hath been found that those seminal parts may be discerned in them which grow up to that body which we call corn. In which words your lordship supposes that a body may be enlarged a hundred-fold, and yet continue the same body; which I cannot understand. But if it could be so, yet I do not think that your lordship will say that every inconceivably small grain of the hundred grains contained in the plant is the same with that grain which contains the whole plant; for then it will follow that one grain is the same with a hundred, and a hundred the same with one. For consider what St. Paul here speaks of, that which is sown and dies; i. e. the grain sown in the field. He says of it, that it is not the body which shall be. The two bodies of which St. Paul here speaks, are that which is sown, and that which shall be. Which of these is that invisible seminal plant, of which your lordship speaks? Not the grain that is sown; for that the apostle says must die; but this little embryonated plant dies not. Or does your lordship mean the body that shall be? But by these words St. Paul cannot be supposed to denote this embryonated plant, for that is contained in the seed that is sown, and could not be spoken of as the body that shall be. Therefore I cannot see what use it is to introduce this third body which St. Paul mentions not.

Your lordship goes on: St. Paul indeed saith, that we sow not the body that shall be, but he speaks not of the identity, but the perfection of it. Here my understanding fails me again; for I cannot understand St. Paul to say that the grain which was sown at seed time is the same with every grain that springs from it; and I never thought of any seminal parts so wonderfully improved by the providence of God, whereby the same plant should produce itself.

Your lordship's next words are, And although there be such a

ed, make the relations lasting as the subject; v. g. fathers, sons, cousins, fellow countrymen, &c. These

difference from the grain itself when it comes up to be perfect corn, that it may be said to outward appearance not to be the same body, yet, with regard to the seminal and organical parts, it is as much the same, as a man grown up is the same with the embryo in the womb. Answer, St. Paul does not compare the body produced with the organical parts contained in the grain, but with the sensible grain that was sown. Microscopes had not then discovered the little plant in the seed; and had it been revealed to St. Paul, it was unknown to the Corinthians, and would have been of no use to them as an argument. But granting it, yet your lordship proves not thereby the raising of the same body: for that the body of the embryo and the body of a man grown up is the same body, I think no one will say, unless he can persuade himself, that a body that is not the hundredth part of another, is the same with that other.

Your lordship goes on: And though many arguments may be used to prove that a man is not the same, because life, which depends on the course of the blood and the manner of respiration and nutrition, is so different in both states; yet that man would be thought ridiculous that should seriously affirm, that it was not the same man. And your lordship says, I grant that the variation of great parcels of matter in plants alters not the identity, and that the organisation of the parts in one coherent body, partaking of one common life, makes the identity of a plant. Answer, The question is not about the same man, but the same body. I no where say, that a plant which was once no bigger than a straw, and afterwards grows to be a fathom about, is the same body, though it still be the same plant. The king's oak in Epping Forest, which, from not weighing an ounce, grew to have many tons of timber in it, was all along the same plant, but not the same body: for that which makes the same plant does not make the same body, the one being the partaking in the same vegetable life, and the other consisting of the same numerical parts of matter. And your lordship's inference from my words above quoted seems to me a strange one, viz. So that in things capable of any sort of life, the identity is consistent with a continued succession of parts, and so the wheat grown up is the same body with the grain that was sown. If my words were put into a syllogism, this would hardly be brought to be the conclusion. But your lordship goes on with consequence on consequence, till you bring it to the resurrection of the same body. You say: And thus the alteration of the parts of the body at the resurrection, is consistent with its identity, if its organisation and life be the same: and this is a real identity of body, which depends not on consciousness. From whence it follows that to make the same body, no more is required, but restoring life to the organised parts of it. This deduction, wherein, from those words of mine, that speak only of the identity of a plant, your lordship in-

I call natural relations. Wherein we may observe that mankind have fitted their words rather to com-

fers, there is no more required to make the same body, than to make the same plant, being too subtle for me, I leave to my reader to find out.

‘Your lordship says, That I grant likewise, that the identity of the same man consists in a participation of the same continued life, by constantly fleeting particles of matter in succession vitally united to the same organised body. Answer, I speak of the identity of the man, and your lordship concludes that there is no difficulty of the sameness of the body. If I understand your lordship, you argue that from my words it will follow that it may be the same body that is raised at the resurrection. If so, your lordship has proved that my book is not inconsistent with the article of the resurrection of the same body.

‘Your lordship says, St. Paul supposes, that it must be that material substance to which the soul was before united: for, saith he, ‘it is sown in corruption, it is raised in incorruption,’ &c. Can a material substance, which was never united to the body, be said to be sown in corruption? I answer, Can a material substance, which was never laid in the grave, be said to be sown? For your lordship says, You do not say the same individual particles which were united at the point of death, shall be raised at the last day; and no other particles are laid in the grave.

‘But your lordship proves that the same body shall be raised that was sown, in these following words: For what does all this relate to a conscious principle? Answer, The Scripture being express, that every one shall receive according to the deeds done in the body, it was suited to common apprehensions to speak of the body that each one was to have, as he would be apt to speak of it himself. The apostle proposes nothing for or against the same body, as necessary to be believed. That which he is plain in, is condemning such questions, which would serve only to perplex, not to confirm, what was necessary for them to believe, viz. a day of judgment and retribution.

‘But your lordship says, The apostle speaks plainly of that body which was once quickened, and afterwards falls into corruption, and is to be restored with more noble qualities; and your lordship quotes the words following: ‘But this corruption must put on incorruption, and this mortal must put on immortality:’ and you add, that you do not see how he could more expressly affirm the identity of this corruptible body with that after the resurrection. Your lordship best knows what you see; but if St. Paul had said, in express words, that the same bodies should be raised, every body will see he had more expressly affirmed the identity of bodies which men now have with those they shall have after the resurrection. Your lordship adds, And that without any respect to the principle of self-consciousness. Answer, I do not remember that I have any where said, that the identity of the body consisted in self-consciousness. And your lordship concludes thus: And so

mon use than to the nature of things; for there are the same relations betwixt other animals as betwixt

if the Scripture be the sole foundation of our faith, this is an article of it. With submission, your lordship has not produced express words of Scripture, nor proved it to be the meaning of the words you have produced, that the same bodies shall be raised. He who reads with attention the discourse of St. Paul on the resurrection will see that he distinguishes between the dead and the bodies of the dead. The resurrection of the last day is called the resurrection of the dead, and the body is not mentioned but in answer to the question, With what bodies shall those who are raised from the dead come? So that by the dead cannot be precisely meant the dead bodies. St. Paul's answer to the question is not in favor of the same body, unless the being told that the body sown is not the body that shall be, is so. 'Flesh and blood,' says St. Paul, 'cannot inherit the kingdom of God.'

Your lordship adds; And so it hath always been understood by the Christian church. Answer, What the Christian church has always understood is beyond my knowledge: but those who cannot gather their articles of faith from the understanding of the whole Christian church, but are forced to have recourse to the Scripture to find them there, will not easily find it there proposed as an article of faith, that there shall be a resurrection of the same body, but that there shall be a resurrection of the dead.

But supposing your lordship to have demonstrated this to be an article of faith, what is all this to me? Yes, says your lordship in the following words: Your idea of personal identity is inconsistent with it, for it makes the same body, which was here united to the soul, not to be necessary to the doctrine of the resurrection: but any material substance, united to the same principle of consciousness, makes the same body. I do not well know what it is to make a thing not to be necessary to the doctrine of the resurrection. Perhaps your lordship's meaning is, That my idea of personal identity makes it not necessary that, for the raising the same person, the body should be the same. Your lordship adds, But any material substance being united to the same principle of consciousness, makes the same body: and this is brought to prove my idea of personal identity inconsistent with the article of the resurrection. I venture then to read it thus: My idea of personal identity makes the same body which was here united to the soul, not to be necessary at the resurrection; but allows, that any material substance being united to the same principle of consciousness, makes the same body; *ergo*, my idea of personal identity is inconsistent with the article of the resurrection of the same body.

'If this be your lordship's sense in this passage, I answer, 1. that my idea of personal identity does not allow that any material substance being united to the same principle of consciousness, makes the same body: 2. granting that it were the consequence from my idea of personal identity, this would not prove

men, but they are not marked by the same names. This may give us some light into the growth of languages, which are proportioned to the commerce of thoughts familiar amongst men, and not to the extent and nature of things.

3. Sometimes the foundation of considering things with reference to another is some act, whereby one comes to a moral right or obligation to do something. Thus a general hath power to command an army; a citizen hath a right to certain privileges. All this sort, depending on men's wills, I call instituted, which may be distinguished from the natural, in that they are some way or other alterable. Now though these all contain a reference of two things one to the other, yet because one of the two often wants a relative name, the relation is often overlooked. Patron and client are easily allowed to be relations; but constable or dictator are not so readily considered as such, because there is no peculiar name for those under their command.

4. There is another sort of relation, which is the conformity or disagreement of men's voluntary actions to a rule to which they are referred, which may be called moral relation. Human actions are so many mixed modes, a great part whereof have names annexed to them. But it is not enough to have determined ideas of them; we have a farther concernment,

that my idea was inconsistent with the proposition that the same body shall be raised, but on the contrary affirms it: for nothing can be plainer, than that in Scripture it is revealed, that the same persons shall be raised: if, therefore, whatever matter be joined to the same principle of consciousness makes the same body, it is demonstration, that if the same persons are raised, they have the same bodies. Yet your lordship says, it is inconsistent with the resurrection, for it makes the same body, which was here united to the soul, not to be necessary. I answer, 3. that this is the first time I ever learnt that not necessary was the same with inconsistent. It is not necessary to the same person that his body should always consist of the same numerical particles; yet this makes it not inconsistent with God's preserving, if he thinks fit, to the same persons, bodies of the same numerical particles from the resurrection to eternity.

and that is to know whether such actions are morally good or bad.

Good and evil are, as has been shown, nothing but pleasure and pain. Moral good and evil then, is the conformity or disagreement of our actions with some law, whereby good and evil is drawn on us from the will and power of the lawgiver, which good and evil we call reward and punishment. Of these moral laws, there seem to be three sorts, with their different enforcements. For since it would be in vain to set a rule without annexing some enforcement; it would be in vain for one intelligent being to set a rule to the actions of another, if he had not in his power to reward compliance and punish deviation.

The laws to which men generally refer their actions are, 1. The divine law, whether promulgated by the light of nature or the voice of revelation. That God has given a rule, there is no one so brutish as to deny. He has a right to do it, and he has power to enforce it by rewards and punishments. This is the only true touchstone of moral rectitude; and by comparing them to this law, men judge of the moral good or evil of their actions.

2. The civil law,—the rule set by the commonwealth to the actions of those that belong to it,—is another rule to which men refer their actions. This law nobody overlooks, the rewards and punishments that enforce it being ready at hand.

3. The law of opinion or reputation, virtue and vice, are names supposed to stand for actions in their own nature right and wrong: but these names, in the particular instances of their application, are attributed only to such actions as in each society are in reputation or discredit. Nor is it strange that men should give the name of virtue to those actions which they judge to be praiseworthy, and call that vice which they account blameable, since otherwise they would condemn themselves. Thus the measure of what is every where called virtue and vice is the approbation

or dislike, which, by a tacit consent, establishes itself in the several societies of men in the world. For though men in society have resigned to the public the disposal of their force, yet they still retain the power of thinking well or ill of the actions of those whom they live and converse with : and thus they establish among themselves what they will call virtue and vice.

That this is the common measure of vice and virtue will appear, when it is considered, that though what passes for virtue in one country may be considered vice in another, yet virtue and praise, vice and blame, always go together. Virtue and praise are so united, that they are often called by the same name. *Sunt sua præmia laudi*, says Virgil : and though, perhaps, by the different temper, education, or interest of different sorts of men, it fell out, that what was thought praiseworthy in one place was censured in another, yet virtue and vice for the most part kept the same every where : for as it is natural to encourage with esteem that wherein every one finds his advantage, and to discountenance the contrary ; it is no wonder that esteem and discredit, virtue and vice, should everywhere, in a great degree, correspond with the rule of right which the law of God hath established ; since nothing so directly secures the good of mankind as obedience to his laws, and nothing breeds so much mischief as neglect of them. And therefore men, without renouncing their own interest, could not mistake in placing their commendation and blame on that side that deserved it not. Those whose practice was otherwise, failed not to approve what was right. In a corruption of manners the boundaries of virtue and vice were preserved ; so that the exhortations of inspired teachers have not feared to appeal to common repute : ' Whatsoever is of good report,' &c. Phil. iv. 8.

If any one should imagine that I forget my own notion of a law, when I make men judge of virtue and

vice by the consent of private men who have no power to enforce the law, I think I may say, that he who imagines commendation and disgrace not to be strong motives on men, seems little skilled in the history of mankind; the greatest part of whom govern themselves by the law of fashion rather than by the laws of God or the magistrate. Few men reflect on the penalties that attend the breach of God's laws; and those who do, entertain thoughts of future reconciliation for their transgressions; and they frequently flatter themselves with the hopes of impunity from the laws of the commonwealth: but no man escapes censure who offends against the fashion. To bear up under the constant dislike of his own familiars is a burden too heavy for human sufferance: and he must be made up of irreconcilable contradictions, who can take pleasure in company, and yet be insensible of contempt and disgrace from his companions. These three; 1. the law of God, 2. the law of society, and, 3. the law of fashion, are those by which men take their measures of moral rectitude.

Whether the rule by which we try our actions be the fashion of the country or the will of a lawmaker, the mind is able to judge whether the action agrees or disagrees with it. The rule being nothing but a collection of simple ideas, the conformity is but so ordering the action that the simple ideas belonging to it may correspond to those which the law requires. And thus we see how moral notions terminate in ideas received from sensation and reflection. For let us consider the complex idea we signify by the word 'murder'; and we shall find it a collection of simple ideas derived from sensation and reflection; viz. 1. From reflection we have the ideas of willing, considering, proposing, and malice, and also of life and self motion. 2. From sensation we have the ideas which are to be found in man, and of some action whereby we put an end to perception and motion; all which ideas are comprehended in the word murder. This collection

of simple ideas being found to agree or disagree with the esteem of the country I have been bred in, I call the action virtuous or vicious. If I have the will of a supreme invisible law maker for my rule, I call the action sin or duty; if I compare it to the civil law, I call it crime or no crime. So by whatever standard we frame our ideas of virtues and vices, they are made up of collections of simple ideas derived from sensation or reflection.

To conceive rightly of moral actions, we must take notice of them, 1. as they are in themselves. Thus drunkenness or lying signify such a collection of simple ideas which I call mixed modes; and in this sense they are positive absolute ideas. 2. Our actions are good, bad, or indifferent, and in this respect they are relative; it being their conformity to or disagreement with a rule that makes them good or bad. Thus challenging and fighting with a man is called duelling, which, considered in relation to the law of God, deserves the name of sin; to the law of fashion in some countries, valor and virtue; and to some municipal laws, a crime. In this case, where the positive mode has one name, and another name as it stands in relation to the law, the distinction may be easily observed.

But when the idea of the action and its moral relation are comprehended under one name, then the relation is less taken notice of. Thus taking from another what is his, without his knowledge or allowance, is called stealing. But that name being understood, to signify the moral pravity of the action, men condemn stealing as an ill action: and yet the private taking away a sword from a madman, though it properly be denominated stealing, yet by the law of God, it is no sin.

It is not to be expected here that I should mention all sorts of relations: those I have mentioned are some of the most considerable, and are such as may serve to

let us see whence we get our ideas of relations, and wherein they are founded. But before I quit this argument, let me observe,

1. That all relation is ultimately founded in simple ideas got from sensation or reflection. So that all we have in our thoughts when we speak of relations, is but simple ideas, or some collections of simple ideas, compared one with another. When a man says, Honey is sweeter than wax, his thoughts terminate in the simple idea sweetness : though where they are compounded or decompounded, the simple ideas they are made up of are seldom noticed. Thus the word friend being taken for a man who loves, and is ready to do good to another, has, 1. the simple ideas comprehended in the word man ; 2. the idea of love ; 3. the idea of readiness ; 4. the idea of action ; 5. the idea of good, which signifies any thing that may advance his happiness, and terminates in particular simple ideas : thus all moral words terminate at last, though perhaps more remotely, in a collection of simple ideas.

2. That in relations we have as clear a notion of the relation as we have of those simple ideas wherein it is founded. For if I have a clear idea of sweetness, light, or extension, I have too of equal, or more, or less.

3. That in these I call moral relations, I have a true notion of the relation by comparing the action with the rule, whether the rule be true or false. For though the rule be erroneous, yet the agreement or disagreement observable in that which I compare with it, makes me perceive the relation. Though, measuring by a wrong rule, I may judge amiss of its moral rectitude, I am not mistaken in the relation which the action bears to the rule I compare it to, which is agreement or disagreement.

CHAPTER XXIX.

Of clear and obscure, distinct and confused Ideas.

Having shown the original of our ideas, and considered the difference between the simple and the complex, and observed how the complex are divided into modes, substances, and relations, it will be thought perhaps that I have dwelt long enough on the examination of ideas: I must yet ask leave to offer some few other considerations concerning them. The first is, that some are clear, and others obscure; some distinct, and others confused.

The perception of the mind being most aptly explained by words relating to sight, we shall best understand what is meant by clear and obscure in our ideas, by reflecting on what we call clear and obscure in the objects of sight. We give the name of obscure to that which is not placed in sufficient light to enable us to see the figure and colors, which, in a better light, would be discernible. In like manner, our ideas are clear, when they are such as the objects, whence they were taken, might in a well-ordered sensation present them. So far as they want any of that original exactness and first freshness, they are obscure. Complex ideas are clear, when the simple ideas that go to their composition are clear.

The cause of obscurity in simple ideas seems to be, either dull organs, or slight impressions, or weakness of memory: for if the faculties of perception, like hardened wax, will not receive the impression; or, like wax of too soft a temperature, will not hold it; or if the seal be not applied with sufficient force; in any of these cases, the print will be obscure.

As a clear idea is that of which the mind has a full perception, so a distinct idea is that wherein the mind perceives a difference from all others; and a confused idea is one which is not sufficiently distin-

guishable from another, from which it ought to be different.

If no idea be confused but such as is not distinguishable from another, it will be hard, it may be said, to find a confused idea ; for an idea can be no other but such as the mind perceives it to be, and that perception distinguishes it from other ideas, which cannot be other without being perceived to be so.

To remove this difficulty, we must consider that things ranked under distinct names are supposed different enough to be distinguished, and the greatest part of different names are supposed to stand for different things. Now that which makes an idea confused is when it is such that it may as well be called by another name.

The defaults which occasion this confusion are chiefly the following : 1. When any complex idea (for such are most usually confused) is made up of too small a number of simple ideas. Thus he that has an idea made up of the simple ones of a beast with spots has but a confused idea of a leopard, it not being sufficiently distinguished from a lynx, and several other spotted beasts : so that the idea, though it has the peculiar name, leopard, is not distinguishable from those designed by the names, lynx, or panther.

2. Another default is when the particulars, though enough in number, are so jumbled together, that it is not discernible whether it more belongs to the name given it than to any other. We may conceive of this confusion from a sort of pictures, wherein the colors have no discernible order in their position. The draught itself is no more a confused thing than the picture of a cloudy sky ; but that which makes it be thought confused, is the applying to it some name to which it does no more discernibly belong than to some other ; v. g. when it is said to be the picture of a man, then any one counts it to be confused, because

it is not discernible to belong more to the name man, than to the name baboon : but when a cylindrical mirror, placed right, hath reduced those irregular lines into due order, then the eye sees that it is a man, and the confusion ceases. Just so it is with our ideas, which are the pictures of things.

3. A third defect is when any one of our ideas is uncertain and undetermined. Thus we observe men, using words before they have learned their precise signification, change the idea almost as often as they use the word.

Thus we may observe how much names are the occasion of denominating ideas distinct or confused, by an unobserved reference the mind makes of its ideas to such names. But without such reference, it will be hard to say what a confused idea is : and therefore, when a man designs by any name any one particular thing, the complex idea he annexes to that name is more distinct, the more particular the ideas are, and the greater and more determinate the number and order of them.

Confusion concerns always two ideas. When therefore we suspect any idea to be confused, we must examine what other it is in danger of being confounded with, and that will always be found an idea belonging to another name, and so should be a different thing.

If there be any other confusion of ideas, yet this it is which most of all disorders men's thoughts and discourses. Where there are supposed two different ideas marked by two different names, which are not as distinguishable as the sounds that stand for them, there never fails to be confusion. The way to prevent it, is to collect into our complex idea all those ingredients whereby it is differenced from others, and to them so united in a determinate number and order apply steadily the same name.

Our complex ideas being made up of collections

and variety of simple ones, may be clear and distinct in one part, and obscure and confused in another. A man who speaks of a chiliaedron, or a body of a thousand sides, may have a confused idea of the figure, though a distinct one of the number : so that he, being able to discourse concerning that part of his complex idea which depends on the number of a thousand, is apt to think that he has a distinct idea of a chiliaedron, though it be plain he has no precise idea of its figure so as to distinguish it from one that has but 999 sides. In which incomplete ideas we are apt to impose on ourselves and wrangle with others : for being satisfied in that part of the idea we have clear ; and the name which is familiar to us being applied to the whole containing that part which is imperfect and obscure, we are apt to draw deductions from the confused part as we do from the other.

Having frequently in our mouths the word ' eternity,' we are apt to think we have a positive idea of it. We may indeed have a clear idea of duration, and of a very great length of duration ; we may also have the idea of the comparison of that with one still greater. But it not being possible to include in the idea of any duration the whole extent of a duration which supposes no end ; that part which is still beyond the bounds of the duration represented to the thoughts, is obscure ; and hence, in reasoning about infinity, we involve ourselves in absurdities.

In matter we have no clear ideas of the smallness of parts much beyond the smallest that occur to our senses ; and when we talk of the infinite divisibility of matter, though we have clear ideas of division and divisibility, yet of the bulk of the body to be thus infinitely divided, after certain progressions, I think we have no clear nor distinct idea at all : for that idea which is to represent only bigness must be very obscure, which we cannot distinguish from one ten times as big, only by number : so that we have clear

ideas of ten and one, but no distinct ideas of two such extensions. Endless divisibility gives us no more a clear and distinct idea of infinite parts, than endless addibility gives us a clear and distinct idea of infinite number, they both being only a power of still increasing the numbers, be it already as great as it will.

CHAPTER XXX.

Of real and fantastical Ideas.

Besides what we have already mentioned, other considerations belong to ideas, in reference to things whence they are taken. And thus they may come under a threefold distinction, and are, 1. real or fantastical; 2. adequate or inadequate; 3. true or false.

1. Real ideas are such as have a conformity with the real existence of things: fantastical are such as have no foundation in nature. If we examine the several sorts of ideas above mentioned, we shall find that, 1. our simple ideas are all real. Not that they are the images or representations of what does exist, the contrary whereof, in all but primary qualities, hath been already shown; but because they answer and agree to those powers of things which produce them in our minds; that being all that is requisite to make them real, and not fictions at pleasure. For in simple ideas the mind is wholly confined to the operation of things on it, and can make to itself no simple idea more than what it has received.

But complex ideas, being combinations of simple ideas united under one general name, the mind of man uses a kind of liberty in forming those complex ideas. How else comes it to pass that one man's idea of gold, or justice, is different from another's, but because he has put in, or left out, some simple idea which the other has not? The question then is, What

collections agree to the reality of things, and what not? And to this I say that,

2. Mixed modes and relations, having no other reality than what they have in the minds of men, nothing more is required to make them real, but that they be so framed, that there be a possibility of existing conformable to them, and that they have a conformity to the ordinary signification of the name that is given to them.

3. Our complex idea of substances being made in reference to things without us, are no farther real than as they are such combinations of simple ideas, as are really united, and co-exist in things without us. On the contrary, those are fantastical, which are made up of such collections of simple ideas as were never united in one substance; v. g. a rational creature, consisting of a horse's head joined to a body of human shape, or such as the centaurs are described. Whether such substances can exist we do not know; but these ideas being conformable to no existing pattern, they ought to pass with us for barely imaginary.

CHAPTER XXXI.

Of adequate and inadequate Ideas.

Those ideas I call adequate, which perfectly represent those archetypes, which the mind supposes them taken from; inadequate ideas are such as are but an incomplete representation of those archetypes to which they are referred. On which account it is plain,

1. That all our simple ideas are adequate; because being the effects of certain powers in things fitted to produce such sensations in us, they cannot but be adequate to those powers: for if sugar produce in us the idea of whiteness and sweetness, we are sure there is in sugar a power to produce those ideas: and each

sensation answering the power that operates on our senses, the idea so produced is a real idea, and cannot but be adequate. The things, indeed, producing in us these simple ideas are spoken of as if those ideas were real beings in them, but they are in truth only powers to excite such ideas in us.

2. Our complex ideas of modes being collections of simple ideas, which the mind puts together without reference to any archetype, cannot but be adequate ideas, because they, not being intended for copies of things really existing, but for archetypes made by the mind to denominate things by, cannot but have that perfection which the mind intended they should. Thus by having the idea of a figure of three sides meeting at three angles, I have a complete idea : and the mind does not think that any understanding can have a more perfect idea of a triangle than itself has in that complex idea of three sides and three angles. But in our ideas of substances it is otherwise ; for desiring to copy things as they really do exist, we perceive our ideas attain not to that perfection we desired ; and finding something still wanting, our ideas are inadequate : but mixed modes having nothing to represent but themselves, cannot but be adequate. He that first put together the idea of danger, of absence of fear, of consideration of what was to be done, and of executing that without disturbance, had in his mind the complex idea made up of that combination, and laying it up in his mind with the name ' courage ' annexed to it, had thereby a standard to measure actions by, as they agreed to it. The idea thus made and laid up for a pattern, must necessarily be adequate, being referred to nothing else but itself.

Indeed, another person learning the word courage, may make an idea to which he gives that name different from what the author first applied it to. In this case, making the other man's idea the pattern of his idea in thinking, as the other man's word is the

pattern of his in speaking, his idea is so far inadequate, as it is distant from the pattern to which he refers it. Therefore these complex ideas of modes may be inadequate, when they agree not to that which the mind designs to be their archetype; but this refers more to proper speaking than to knowing right.

3. Now the ideas of substances have in the mind a double reference: 1. sometimes they refer to a supposed real essence of things; 2. sometimes they are designed to be representations of things that exist, by ideas of qualities discoverable in them. In both ways the copies are inadequate.

1. It is usual for men to make the names of substances stand for things, as supposed to have certain real essences, whereby they are of this or that species; and names standing for nothing but the ideas that are in men's minds, they must consequently refer their ideas to such real essences, as to their archetypes: yet if you ask what those essences are, it is plain that men are quite ignorant of them; whence the ideas they have in their minds, being referred to real essences as to unknown archetypes, are so far from being adequate, that they cannot be supposed to be any representations of them at all. Our complex ideas of substances are certain collections of simple ideas constantly observed to exist together; but such a complex idea cannot be the real essence of any substance, for then the properties we discover in the body would depend on that complex idea, and be deducible from it, and their necessary connexion with it be known: just as all properties of a triangle depend on, and (as far as they are discoverable) are deducible from the complex idea of three lines including a space: but in our complex ideas of substances no such ideas are contained, on which all the other qualities found in them depend. The common idea men have of iron is a body of a certain color, weight, and hardness, and a

property they consider to belong to it is malleableness; but this property has no necessary connexion with that complex idea or any part of it; and there is no more reason to think that malleableness depends on its color, weight, and hardness, than that these qualities depend on its malleableness. The farthest I can go then is only to presume that the real essence of a body, or that internal constitution on which its qualities depend, is nothing but the figure, size, and connexion of its solid parts.

2. Those who neglect the useless supposition of unknown real essences and endeavor to copy substances by putting together the simple ideas which make up our complex ideas of them, do not arrive at perfectly adequate ideas of them, because the copies never exactly and fully contain all that is to be found in their archetypes; and, besides, wishing to make their specific names as clear and as little cumbersome as possible, they only combine a few of those simple ideas which they know are to be found in them: so that as we never can know all the powers that are in any one body, our idea of a substance can never be adequate, or made up of a collection of all its properties. Whoever first met with a lump of gold could not rationally suppose that its bulk and figure depend on its essence: these then did not go into his idea of that species of body: its peculiar weight and color were, perhaps, the first qualities he put into his idea of the species; now these are both but powers, the one producing the idea of yellow, and the other of its outweighing a body of equal bulk put into a pair of equal scales. Another may have added to these the ideas of fusibility and fixedness, two passive powers in relation to the operation of fire on it; and another, those of ductility, and solubility in *aqua regia*. But no one who has considered the properties of bodies in general, or of this in particular, can doubt that gold has infinite other properties as inseparable from its constitution as color

and weight; the changes that one body is apt to make and receive in another, exceeding not only our knowledge, but even our imagination. So that all our complex ideas of substances are inadequate; which would be so also in mathematical figures, if we were to have our idea of them only by collecting their properties in reference to other figures.

Our simple ideas then are adequate, because, being intended to express only a power to produce such a sensation, that sensation, when produced, cannot but be the effect of that power. Our complex ideas are not perfect copies, but inadequate; for whatever collection of simple ideas the mind makes of any substance, it cannot be sure that it answers all that are in that substance; and, after all, if we had in our complex idea an exact collection of all the secondary qualities of any substance, we should not thereby have an idea of the essence of the thing. But complex ideas of modes and relations are original and archetypes, and exactly answer to that which the mind intends them to be conformable to. These being such collections of such simple ideas as the mind itself puts together, are archetypes of modes that may exist, and belong only to such modes when they do exist. The ideas therefore of modes and relations cannot but be adequate.

CHAPTER XXXII.

Of true and false Ideas.

Though truth and falsehood properly belong only to propositions, yet ideas, with some deviation from the strict signification of the word, are often termed true or false. Ideas, being only appearances, or perceptions in our minds, cannot, any more than the names of things, be properly called true or false; but when the mind has passed some judgment on its ideas, that

is, has affirmed or denied something of them, then in popular language we call them true or false.

Ideas may be called true or false according as they are justly or not referred to things with which we suppose them to be conformable. The most usual cases are the following :

1. When the mind supposes any idea it has conformable to that in other men's minds called by the same name.

2. When the mind supposes any idea it has to be conformable to some real existence.

3. When the mind refers any of its ideas to that real constitution and essence of any thing, whereon its properties depend.

These suppositions the mind is apt to make, especially concerning its abstract complex ideas ; for if the mind proceeded to knowlege by particulars, its progress would be very slow ; therefore in the contemplation of things it is apt to rank them into sorts, that what knowlege it gets of any may be extended to all of that sort ; and so advance in knowlege by larger steps.

If we will observe the course of the mind, we shall find that having got an idea which it thinks it may have use of, it first abstracts it, then gets a name to it, and so lays up in the memory with the mark of that name. Hence, when any one sees a new thing of a kind that he knows not, he asks what it is by inquiring the name.

But this abstract idea being something in the mind between the name and the thing, it is in our ideas that the rightness of our knowlege and the propriety of speaking consists. Hence men suppose that the ideas they have in their minds agree to the things existing without, and are the same to which the names do properly belong.

1. When the truth of our ideas is judged of by the conformity they have to the ideas which other men

signify by the same name, they may, any of them, be false. But simple ideas are least liable to be so, because a man may easily satisfy himself what the simple ideas are by the objects they are to be found in : therefore it is seldom that any one mistakes in his names of simple ideas, or confounds the names of ideas belonging to different senses.

Complex ideas are more liable to be false, and the complex ideas of mixed modes more than those of substances ; because in substances certain sensible qualities serve to distinguish one sort from another ; but in mixed modes we are more uncertain ; and in referring our ideas to those of other men, called by the same name, ours may be false.

This sort of falsehood is much more familiarly attributed to our ideas of mixed modes than to any other. When a man is said to have a false idea of justice, gratitude, or glory, it is because his idea agrees not with those of other men. The reason of which is, that ideas of mixed modes, being voluntary combinations of simple ideas, we have nothing else to refer these ideas to as a standard, but the ideas of those who are thought to use those names in their most proper significations.

2. As to the truth and falsehood of our ideas, in reference to the real existence of things, when that is made the standard of their truth, none can be termed false, but only complex ideas of substances.

Simple ideas being such perceptions as God has fitted us to receive by external objects, their truth consists in nothing else, but in such appearances as are produced in us, and must be suitable to those powers he has placed in external objects, or else they could not be produced in us ; and thus, answering those powers, they are true ideas. Nor do they become liable to any imputation of falsehood ; for God having set them as marks of distinction, whereby we may discern one thing from another, it alters not the

nature of the idea, whether we think the idea of blue be in the violet itself or in our mind only, and only the power of producing it by the texture of its parts; for the name of blue denotes nothing but that mark of distinction that is in the violet, discernible by our eyes only, whatever it consists in, that being beyond our capacities to know.

Neither would it carry imputation of falsehood to our simple ideas, if, by the different structure of our organs, it were so ordered that the same object should produce in several men's minds different ideas at the same time: for since this could never be known, because one man's mind could not pass into another man's body, to perceive what appearances were produced by these organs; neither the ideas hereby, nor the names, would be at all confounded, or any falsehood be in either.

From what has been said concerning our simple ideas, I think it evident that none of them can be false in respect of things existing without us. Neither can our complex ideas of modes, in reference to the essence of any thing really existing, be false; because complex ideas have no reference to any pattern existing or made by nature: but our complex ideas of substances being referred to patterns in things themselves, may be false. They are false, 1. when they put together simple ideas which, in the real existence of things, have no union: 2. when, from any collection of simple ideas, which always exist together, there is separated any other simple idea which is constantly joined with them.

Though, in compliance with the ordinary way of speaking, I have showed on what ground our ideas may be true or false, yet, if we look a little nearer into the matter, it is from some judgment that the mind makes that it is true or false: for truth and falsehood being never without affirmation or negation, where things are joined or separated, truth lies in so joining

or separating these signs, as the things they stand for do in themselves agree or disagree; and falsehood in the contrary.

Any idea, then, whether conformable or not to the existence of things, or to other men's ideas, cannot for this alone be called false; but the falsehood is,

1. When the mind having any idea, it judges it the same that is in other men's minds signified by the same name, when indeed it is not: 2. when having a complex idea made up of such a collection of simple ones as nature never put together, it judges it to agree to a species of creatures really existing: 3. when in its complex idea it has united a number of simple ideas that exist together in some sorts of creatures, but has left out others as much inseparable, and judges this to be a complete idea of a sort of things, which really it is not: 4. the mistake is greater, when I judge that this complex idea contains in it the real essence of any body existing.

To conclude, a man having no notion of any thing without him, but by the idea he has of it in his mind, he may make an idea neither answering the reality of things, nor agreeing to the ideas commonly signified by other people's words; but cannot make a wrong or false idea of a thing which is no otherwise known to him but by the idea he has of it. Our ideas may be called right or wrong, according as they agree or disagree to those patterns to which they are referred. Truth or falsehood will, I think, scarce agree to them, but as they contain in them some mental proposition.

CHAPTER XXXIII.

Of the Association of Ideas.

We are apt enough to discover and condemn the extravagances of other men in their opinions, reasonings, and actions, though we are almost always blind

to much greater faults of a similar nature in ourselves: This does not proceed wholly from self-love; for ingenuous men are frequently guilty of it. It is usually attributed to education and prejudice, for the most part truly, though that does not show distinctly whence the disease arises. Education is often rightly assigned the cause, and prejudice is a good general name for the thing itself; but we must look farther for the original cause of this sort of madness, which, though a harsh name, is really the proper one for this opposition to reason.

There is scarcely a man so free from it, as that if he were to argue or act usually as he does occasionally, even when not under the power of unruly passion, he would not be thought fitter for Bedlam than civil conversation; and, indeed, inquiring by the by into the nature of madness, I found it to spring from the very same root as the unreasonableness we are here speaking of. Some of our ideas have a natural connexion with one another, and it is the office and excellence of our reason, to keep them united in that correspondence which is founded in their peculiar beings. There is another connexion of ideas wholly owing to chance or custom; ideas in themselves not at all related, come to be so united in some men's minds, that one no sooner comes into the understanding than its associate appears with it; and when there are more than two so united, the whole set always show themselves together. This combination of ideas is either voluntary or casual; and so varies in different men according to their difference of inclination, education, interest, &c.

Custom settles habits of thinking in the understanding, as well as of determining in the will, and of moving in the body; all which seem to be but trains of motion in the animal spirits, which when once set a going, continue in the same track they have been used to till the motion becomes easy, and as it were

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natural. As far as we can comprehend thinking, thus ideas seem to be produced in our minds; or if not, this may serve to explain their following one another in an habitual train, when once put into a certain track, as well as it does to explain such motions of the body. A musician used to any tune will find the ideas of the notes follow one another, and his fingers strike the keys orderly, without any care or attention. To such associations of ideas may be attributed most of the sympathies and antipathies observable in men, which work as strongly, and produce as regular effects as if they were natural; and are therefore called so, though at first they had no other original than the accidental connexion of two ideas, which either the strength of the first impression, or future indulgence so united, that they afterwards appear in the mind as one idea. Some of our antipathies indeed are truly natural, depending on our original constitution, and born with us; but many which we think natural, might be traced to early impressions of which we took no notice. The name of honey excites immediately ideas of dislike and sickness in the mind of a grown person who has been surfeited with it; but then he knows the origin of this indisposition: had it been given him when a child, the same effects would have followed, but he would have mistaken the cause, and counted the antipathy natural. I do not mention this for the purpose of distinguishing nicely between natural and acquired antipathies, but to prevent the undue connexion of ideas in the minds of young people, who are most susceptible of lasting impressions; and this connexion of ideas tends more than any thing to give a wrong bias to our natural and moral actions, to our passions, reasonings, and notions. The idea of goblins has no more connexion with darkness than light; but if you once raise the two ideas together in the mind of a child, he may never be able to separate them so long as he lives. A man receives an injury

from another, and associates so strongly the ideas of the man and the pain he suffered from him, that he scarcely distinguishes them, but has as much an aversion for the one as for the other; thus slight occasions often beget hatred and continue quarrels. A man suffers pain in a certain place, and though these ideas have in nature no connexion, yet the idea of the place brings with it that of the pain, and he can as little bear the one as the other.

Reason cannot relieve us from the effects of this combination; and time cures certain affections which reason cannot prevail over. When the death of a child has destroyed the comfort of its mother, the consolations of reason are vain, till time has separated the idea of the enjoyment and its loss, from the idea of the child returning to her memory; and therefore some, in whom the union of these ideas is never dissolved, carry an incurable sorrow to their graves.

A gentleman, who had been cured of madness by a very severe operation, owned the cure to be the greatest obligation he could have received, but could never bear the sight of the operator. Many children so associate the pain of correction with a book at school, that that book ever after is their aversion. Many other instances of the power of the accidental association of ideas to render things disgusting might be enumerated.

Intellectual habits thus contracted are not less frequent and powerful, though less observed. Let custom, from the very childhood, have joined figure, and shape to the idea of God, and what absurdities will that mind be liable to about the Deity! Let the idea of infallibility be inseparably joined to any person, and the existence of one body in two places at the same time shall be believed whenever he dictates it. Some such wrong and unnatural combinations of ideas will be found to establish the irreconcilable opposition between different sects of philosophy and religion; for we must allow some of them at least to pursue truth

sincerely. Some independent ideas then of no alliance to one another, must be so coupled in their minds by education, custom, and the constant din of their party, that they always appear together and operate like one idea. This gives sense to jargon, demonstration to absurdities, and consistency to nonsense; and is the foundation of the greatest, I had almost said, of all the errors in the world. It is at least the most dangerous one, since it hinders men from seeing and examining.

Having thus given an account of our ideas, I intend to show immediately the use made of them by the understanding; but I now find that there is so close a connexion between ideas and words, that it is impossible to speak clearly of our knowlege, which all consists in propositions, without first considering the nature, use, and signification of language.

BOOK III.

CHAPTER I.

Of Words or Language in General.

GOD having designed man for a sensible creature, gave him language, as the great instrument and common tie of society. Man therefore had by nature organs fit to frame articulate sounds, or words; but as these are not sufficient for language, he is enabled to use these sounds as signs of internal conceptions; so that the ideas of men's minds may be mutually communicated. Yet did not this render words sufficiently useful: sounds must not only be the signs of ideas, but must comprehend several particular ideas; for to denote every particular thing by a distinct name, would multiply words so as to perplex their use; wherefore, general terms were invented to make one word denote a multitude of particular existences. This advantageous use of signs was obtained only by the difference of the ideas they were made signs of. Some words, instead of denoting any ideas, denote the absence of many or all ideas, as in Latin *nihil*; in English, 'ignorance,' 'barrenness.' We cannot properly say that these negative or privative words signify no ideas, for then they would be insignificant sounds; but relating to positive ideas, they denote their absence. It may lead us a little towards the original of all our knowledge to remark the great dependence of our words on common sensible ideas; how words derived from obvious sensible ideas are transferred to more abstruse significations, and denote actions and notions quite remote from sense; thus the words 'imagine,' 'apprehend,'

'comprehend,' 'conceive,' 'disgust,' 'disturbance,' 'tranquillity,' are taken from the operations of sensible things, and applied to modes of thinking. The primary signification of spirit is breath, of angel a messenger: and doubtless, in all languages, names standing for things that fall not under the notice of our senses, originated in sensible ideas. Hence we may guess what kinds of notions they were which filled the minds of the beginners of languages; and how nature, even in the naming of things, suggested to men unawares the originals and principles of all their knowledge. From sensible objects men borrowed words to express the operations of their minds; and these being the only sources of their ideas, they were furnished with all the materials of knowledge. But to understand better the use and force of language, as subservient to knowledge, we shall consider, 1. To what, in the use of language, names are immediately applied. 2. Since all, except proper names, are general, we must consider what the sorts and kinds, that is the species and genera of things, are, wherein they consist, and how they come to be made. By these means we shall better discover the right use of words; the natural advantages and defects of language, and the remedies that ought to be used for avoiding the inconveniences of obscurity or uncertainty in the signification of words; without which it is impossible to discourse with any clearness or order concerning knowledge; for knowledge being conversant about propositions, and those most commonly universal ones, has a greater connexion with words than is perhaps suspected.

CHAPTER II.

Of the Signification of Words.

Though man has a variety of thoughts, from which profit and delight might be received, yet they are all within his own heart invisible to others. The comfort

and advantage of society not being to be had without the communication of thought, it was necessary that men should have some external signs whereby those invisible ideas might be made known to others. For this purpose nothing was so fit as articulate sounds. Thus we may conceive how words came to be made use of by men as the signs of their ideas, not by any natural connexion between particular sounds and certain ideas, for then there would be but one language among men ; but by a voluntary imposition, whereby such a word is arbitrarily the mark of such an idea.

The use men have of these marks being to record their thoughts, or to lay them before others, words in their primary signification stand for nothing but the ideas in the mind of him that uses them ; and the end of speech is to make known his ideas to the hearer. Words being voluntary signs, they cannot be voluntary signs imposed by him on things he knows not. That would be to make them signs of nothing, sounds without signification. A child noticing nothing in a substance called gold but the yellow color, applies the word gold only to his own idea of that color, and therefore calls the same color in a peacock's tail gold ; another adds great weight to the color ; and another adds fusibility and malleability to these. The word gold equally expresses the idea of each person, but in each case denotes a different idea.

But though words can properly signify nothing but the ideas in the mind of the speaker, yet men secretly refer them to two other things. 1. They suppose their words to be marks of the ideas in the minds of other men, else they could not be understood. But men usually stand not to examine whether the idea which they, and those they discourse with, have in their minds, be the same ; they think it enough that they use the word in the common acceptation of the language.

2. They often suppose their words to stand also for the reality of things; and thus bring unavoidable confusion and obscurity into their signification.

Concerning words it is also to be considered, 1. That they being the signs of ideas, there comes by constant use to be such a connexion between certain sounds and the ideas they stand for, that the names heard as readily excite certain ideas, as if the objects themselves did actually affect the senses. 2. That though the signification of words are the ideas in the mind of the speaker, yet because by familiar use we have certain articulate sounds readily on our tongues, and are not always careful to examine their signification, it often happens that men set their thoughts more on words than things. But as far as words are of use, so far there is a constant connexion between the sound and the idea, and a designation that the one stands for the other. And every man has so inviolable a liberty to make words stand for what idea he pleases, that no one hath the power to make others have the same ideas in their minds that he has, when they use the same words that he does; and therefore Augustus himself, in the possession of that power which ruled the world, acknowledged he could not make a new Latin word; which was as much as to say, that he could not arbitrarily appoint what idea any sound should be a sign of in the mouths and common language of his subjects. Common use by a tacit consent appropriates certain ideas to certain sounds in all languages, which so far limits the signification of that sound, that unless a man applies it to the same idea he does not speak properly; and unless a man's words excite the same ideas in the hearer, which he makes them stand for in speaking, he does not speak intelligibly.

CHAPTER III.

General Terms.

All things that exist being particulars, it may be thought reasonable that words should be so too. Yet the greatest part of words in all languages are general terms.

1. It is impossible that every particular thing should have a distinct peculiar name: for the signification of words depending on the connexion which the mind makes between its ideas and the signs of them, it is necessary that the mind should have distinct ideas of things and the names applied to them; but it is beyond the human capacity to retain distinct ideas of all the particular things we meet with.

2. If it were possible, it would yet be useless. Men use names only that they may be understood, which is only done when by use or consent the sound I make excites in another man's mind the idea I apply to it in mine. This cannot be done by names applied to particular things, whereof I alone having the ideas in my mind, the names could not be significant to another who was not acquainted with those particular things.

3. Yet granting this feasible, yet a distinct name for every particular thing would be of no use for the improvement of knowledge; which, founded in particulars, enlarges itself to general views, to which things, reduced into sorts under general names, are properly subservient. Use requires these names, and the mind can contain them; yet where convenience demands it, as in the human species, men having to do most with men, each particular object obtains a distinct denomination. Hence cities, rivers, mountains, and frequently horses, &c. have particular names.

The next thing to be considered is how general words come to be made. Words become general by being

made the signs of general ideas, and ideas become general by separating them from the circumstances of time, place, and any other ideas that may determine them to this or that particular existence. By this way of abstraction they are made capable of representing more individuals than one, each of which, having in it a conformity to that abstract idea, is, as we say, of that sort.

To deduce this a little more distinctly;—there is nothing more evident than that the ideas of the persons children converse with are like the persons themselves, only particular. The names they give them are first confined to these individuals. Afterwards, when time and acquaintance have made them observe that there are many other things, that in some agreements of shape and other qualities resemble the persons they have been used to, they frame an idea which they find those many particulars do partake in, to which they give the name of man; and thus they come to have a general name and a general idea.

By the same way that they come by the general name of man, they advance to more general names and notions: for observing that several things which differ from the idea of man, have certain qualities in which they agree with man, by retaining those qualities and uniting them into one idea, they have again another and more general idea: which new idea is made by leaving out some of the properties of man, and retaining only a body with life, sense, and spontaneous motion, comprehended under the name animal.

He that thinks general natures or notions any thing else but such abstract ideas of more complex ones, taken at first from particular existences, will be at a loss where to find them. Of the complex ideas, signified by the names man and horse, leaving out those particulars wherein they differ, and retaining those only in which they agree, and of these making a new idea, and giving the name animal to it, one has a more

general term that comprehends with man several other creatures. The whole mystery of genera and species, which make such a noise in the schools, is nothing else but abstract ideas more or less comprehensive, with names annexed to them.

This may show us why in defining words we make use of the genus, or next general word which comprehends it ; which is to save the labor of enumerating the several simple ideas which the next general word stands for. But though defining by the genus be the shortest way, it may be doubted whether it be the best. It is not the only, and so not absolutely necessary. For definition being nothing but making another understand by words what idea the term defined stands for, a definition is best made by enumerating those simple ideas that are contained in the signification of the term defined. For to one who desired to know what idea the word man stood for, if it should be said that man was a solid extended substance, having life, sense, spontaneous motion, and the faculty of reasoning ; I doubt not the meaning of the term man would be as well understood as when it is defined to be a rational animal.

To return, it is plain that general and universal are the inventions of the understanding, made by it for its own use, and concern only signs, whether words or ideas. When therefore we quit particulars, the generals that remain are only creatures of our own making, their general nature being nothing but the capacity they are put into by the understanding of signifying many particulars : for the signification they have is nothing but a relation, that by the mind of man is added to them.

The next thing to be considered is, what kind of signification general words have. They do not signify one particular thing, for then they would be but proper names, nor do they signify a plurality, for man and men would then signify the same, and the grammatical

distinction of numbers be useless. That which they signify is a sort of things, and the essences of the sorts or species of things are nothing else but these abstract ideas. For having the essence of any species being that which makes any thing to be of that species, and the conformity to the idea to which the name is annexed, being that which gives a right to the name, the having the essence, and the having that conformity, must needs be the same thing; since to be of any species, and to have a right to the name of that species, is all one.

I do not deny that nature makes many things alike; but yet we may say that the sorting of them under names is the workmanship of the understanding, taking occasion, from the similitude it observes among them, to make abstract general ideas, and to use them as patterns to which particular things agree. And when general names have any connexion with particular beings, these abstract ideas are the medium that unites them; so that the essences of species neither are nor can be any thing but those precise abstract ideas we have in our own minds. And therefore the supposed real essences of substances, if different from our abstract ideas, cannot be the essences of the species we rank things into: for two species may be one as rationally as two different essences be the essence of one species.

Nor will any one wonder that these essences are the workmanship of the understanding, who considers that complex ones are often in several men different collections of simple ideas. Nay, even in substances, where their abstract ideas seem to be taken from the things themselves, they are not constantly the same, it having been doubted whether the fœtus were a man, so far as that it hath been debated whether it were or were not to be nourished and baptized. So that in truth every distinct abstract idea is a distinct essence. But since the essences of things are thought by some

to be wholly unknown, it may not be amiss to consider the several significations of the word essence.

1. The proper original signification of the word, as is evident from the formation of it, is the being of any thing, whereby it is what it is : thus the internal constitution of things, whereon their discoverable qualities depend, may be called their essence.

2. The most familiar use of the word essence is its application to the artificial constitution of genus and species, and then it denotes that abstract idea with which any class of things agrees.

These two sorts of essences may be termed real and nominal.

The name of any kind or sort of things always expresses the nominal essence. Concerning the real essence of substances there are two opinions. Some use the word essence for they know not what ; and suppose a certain number of essences, according to which all natural things are made, and of which each partakes, so as to be of this or that species. Others, more rationally, suppose all natural things to have a real but unknown constitution of their insensible parts, whence are derived those sensible qualities by which we distinguish them into sorts. The former of these notions has, I think, very much perplexed the knowledge of natural things. The frequent production of monsters in all the species of animals is a difficulty that cannot consist with this hypothesis ; since it is as impossible that two things, partaking of the same real essence, should have different properties, as that the properties of two circles should be different. Besides, the supposition of unknown essences is so wholly useless, as to be a sufficient reason for our rejecting it, and contenting ourselves with such essences as come within the reach of our knowledge, which, when seriously considered, will be found to be nothing else than those abstract complex ideas to which we have annexed distinct general names. The real and nominal

essence is the same in simple ideas and modes, but different in substances : thus, a figure including a space between three lines, is the real as well as nominal essence of a triangle ; it being not only the abstract idea, to which the general name is annexed, but the very being of the thing itself, the foundation from which all its properties flow : whereas, the two essences of the ring on my finger are apparently different ; for the real constitution of its inseparable parts, on which depend the properties of color, weight, fusibility, &c. makes it gold ; which name is therefore its nominal essence. We are told that essences are all ingenerable and incorruptible : now this cannot be true of the real constitutions of things, which begin and perish with the things themselves ; for all things that exist, except their Author, are liable to change. What is grass to-day, is to-morrow the flesh of a sheep, and soon becomes part of a man, where it is evident that the real essence perishes with each change.

But essences considered as ideas established in the mind, with names annexed, are supposed to remain the same, whatever mutations the particular substances are liable to. The ideas of man and horse remain the same, whatever change the species may undergo ; so that the essence of a species may remain safe and entire, without the existence of one individual of the kind. Were there now no circle actually existing in the world, the idea annexed to the name would not cease to be what it is, and to show what figure has a right to the name of circle. Though there had never been in nature such a beast as an unicorn, yet supposing the name to denote a complex abstract idea that has no inconsistency in itself, the essence of an unicorn is as intelligible, and the idea as permanent, as that of a man. Hence it is evident that the doctrine of the immutability of essences proves them to be only abstract ideas ; and is founded on the relation established between them and certain sounds as signs of

these, which will always be true, as long as the same name can have the same signification.

CHAPTER IV.

Of the Names of Simple Ideas.

Though words signify nothing immediately but ideas in the mind of the speaker, yet we shall find that the names of simple ideas, mixed modes, and natural substances have each of them something peculiar.

1. The names of simple ideas and substances intimate some real existence; but the names of mixed modes terminate in the idea that is in the mind.

2. The names of simple ideas and modes signify always the real as well as nominal essence of their species; but the names of natural substances signify rarely, if ever, any thing but the nominal essences of those species.

3. The names of simple ideas are not capable of any definitions, the names of all complex ideas are. It has not hitherto, as I know, been taken notice of by any body, what words are, and what are not, capable of being defined, whilst some demand definitions of terms that cannot be defined, and others rest satisfied with an explication made by a more general word and its restriction, when after such definition, those who hear it have no more a clear conception of the meaning of the word than they had before.

I will not trouble myself to prove that if the terms of one definition were still to be defined by others, the process would be infinite; but I shall show from the nature of ideas, and the signification of words, why some names can, and others cannot be defined, and which they are.

I think it is agreed that a definition is the showing the meaning of one term by others not synonymous. The names of simple ideas are incapable of being defined, because the several terms of a definition signi-

fyng several ideas, they can by no means represent an idea which has no composition at all. The not observing this difference in our ideas and their names, has produced that eminent trifling in the schools which is so easy to be observed in the definitions they give us of some few of these simple ideas. What more exquisite jargon than their definition of motion; 'the act of a being in power, as far forth as in power?' Nor have modern philosophers, who have endeavored to throw off the jargon of the schools, succeeded much better in defining simple ideas. The atomists, who define motion to be a passage from one place to another, what do they more than put one synonymous word for another? For is it not as significant to say passage is motion, as to say motion is passage? Nor is the Cartesian definition any better; 'the successive application of the parts of the superficies of one body to those of another.'

'The act of perspicuous, as far forth as perspicuous,' is another peripatetic definition of a simple idea, which, though not more absurd than that of motion, yet betrays its insignificance more plainly, because experience will convince any one that it cannot make the word light to be at all understood by a blind man. Those who tell us that light is a great number of globules striking briskly at the bottom of the eye, speak more intelligibly than the schools; but these words, how well soever understood, could not communicate the idea of light to a man born blind. For the cause of any sensation, and the sensation itself, in all the simple ideas of one sense, are two ideas as different as can be; and therefore the Cartesians distinguish very rightly between light itself, as a cause, and the sensation it produces.

Simple ideas are only to be got by those impressions which objects make on our minds by the proper inlets appointed to each sort. If not received in this way no words will explain them: for words being sounds, can produce in us no other simple ideas than of those

very sounds. For to hope to produce an idea of light or color, by a sound however formed, is to expect that sounds should be visible and colors audible, and to make the ears do the office of all the other senses; which is all one as to say that we might taste, smell, and see by the ears, a sort of philosophy worthy of Sancho Pança, who had the faculty to see Dulcinea by hearsay. A studious blind man, who had mightily beat his head about visible objects, and made use of the explication of his books and friends to understand those names of light and colors which often came in his way, bragged one day that he understood what scarlet signified; and on his friend demanding what scarlet was? the blind man answered, It was like the sound of a trumpet. Just such an understanding of the name of any other simple idea will he have, who hopes to get it only from a definition, or other words made use of to explain it.

The case is quite otherwise in complex ideas, which consisting of several simple ones, it is in the power of words standing for the several ideas that make that composition, to imprint complex ideas on the mind which were never there before, and may be defined, provided that none of the terms of the definition stand for any such simple ideas, which he, to whom the explication is made, has never yet had in his thoughts. Thus the word statue may be explained to a blind man by other words, when picture cannot; his senses having given him the idea of figure, but not of colors; which words therefore cannot excite in him.

He that should use the word rainbow to one who knew the colors, but had not seen the phenomenon, might define the word so as to make it understood: but that definition could never make a blind man understand it.

When by means of experience we have our minds stored with simple ideas, and know the names for them, then we are in a condition to define: but when any

term stands for a simple idea that a man has never yet had in his mind, it is impossible by words to make known its meaning to him.

But the names of simple ideas, though undefinable, are generally less doubtful than those of mixed modes and substances; because standing for one simple perception, men for the most part agree in their signification. There is not a multiplicity of simple ideas to be put together, which makes the doubtfulness in the names of mixed modes, nor a supposed unknown essence, which makes the difficulty in the names of substances.

This farther may be observed concerning simple ideas and their names, that they have but few ascents *in linea predicamentali*, as it is called, that is, from the lowest species to the highest genus; for the lowest species being but one simple idea, nothing can be left out of it, so that it shall agree with some other simple idea in a common name. Nothing can be left out of the ideas of white and red to make them agree in appearance, and so have a common name; but the complex idea of man, leaving out his rationality, agrees with brute in the more general idea and name of animal. When, to avoid enumerations, men would comprehend several simple ideas under one name, they use a word which denotes the mode of acquiring them; for to comprehend white, red, and yellow under the name of color, signifies that such ideas are acquired by sight; but to comprehend both colors, sounds, and the like simple ideas under a more general term, they use a word which signifies all such as we acquire by only one sense. And so the general term quality, in its ordinary acceptation, comprehends colors, sounds, tastes, smells, and tangible qualities, with distinction from extension, number, motion, pleasure and pain, which make impressions on the mind, and introduce their ideas by more senses than one. The names of simple ideas, substances, and mixed modes have also

this difference; that those of mixed modes stand for ideas perfectly arbitrary; those of substances are not perfectly so, but refer to a pattern, though with some latitude; and those of simple ideas are not arbitrary at all. The names of simple modes differ little from those of simple ideas.

CHAPTER V.

Of the Names of mixed Modes and Relations.

The names of mixed modes stand for species of things, each of which has its essence. The essences of these species are nothing but abstract ideas to which the name is annexed. Thus far the names and essences of mixed modes have nothing but what is common to them with other ideas: but taking a nearer survey, we shall find that they have something peculiar which may deserve our attention.

Abstract ideas, or the essences of the several species of mixed modes, are made by the understanding, wherein they differ from simple ideas, which are only received from objects presented to the mind. In the next place, they are not only made, but made arbitrarily, wherein they differ from those of substances, which carry with them the supposition of some real being. But in its complex ideas of mixed modes the mind follows not the existence of things exactly, nor does it verify them by patterns containing such peculiar compositions in nature.

To understand this aright we must consider wherein this making of these complex ideas consists; that it is not in making new ideas, but putting together those which the mind had before: wherein the mind, 1. chooses a certain number; 2. gives them a connexion; 3. ties them together by a name.

Nobody can doubt but that these ideas of mixed modes are voluntarily made by the mind, independent of any original patterns in nature, who will reflect that this

sort of complex ideas may be made and have names, and a species be constituted, before any individuals of the species ever existed. The ideas of sacrilege and adultery might be framed before either of them was committed; and we cannot doubt that lawmakers have often made laws about species of actions that were only the creatures of their own understanding; and nobody can deny but that the resurrection was a species of mixed modes in the mind before it existed.

A little looking into these mixed modes will satisfy us that the mind makes them the essence of a certain species, without regulating itself by any connexion they have in nature. For what greater connexion has the idea of a man than the idea of a sheep with killing: that this was made a particular species of action, signified by the word murder, and the other not? Or what union is there in nature, between the idea of the relation of a father with killing, than that of a son or neighbor. that those are combined into one complex idea, and thereby made the essence of the distinct species parricide, while the other make no distinct species at all? It is evident then that the mind by its free choice gives a connexion to a certain number of ideas, which in nature have no more union with one another than others it leaves out.

But though these complex ideas are made by the mind with great liberty, yet they are not made at random: and though not always copied from nature, yet they are always suited to the end for which they are made. The use of language is by short sounds to signify general conceptions. In making mixed modes men therefore have had regard to such combinations as they had occasion to mention to one another. It suffices that we make and name so many complex ideas ~~as~~ mixed modes, as they find they have occasion ~~use~~ for in the ordinary occurrence of their If they join to the idea of killing, the idea of murder, and so make a distinct species from

killing a man's son or neighbor, it is because of the different heinousness of the crime, and the distinct punishment due to it; and therefore they find it necessary to mention it by a distinct name.

A moderate skill in different languages will easily satisfy one of the truth of this, it being so obvious to observe great store of words in one language, which have not any that answer them in another: which shows that the customs of one country have given occasion to make complex ideas which other people have never collected into specific ideas. The terms of our law will hardly find words that answer them in the Spanish or Italian: and the *versura* of the Romans, and the *corban* of the Jews, have no words in other languages to answer them. There are no ideas more common and less compounded than the measure of time, extension, and weight; and the Latin names, *hora*, *pes*, *libra*, are without difficulty rendered by the English names *hour*, *foot*, *pound*; but the ideas a Roman annexed to these Latin names were far different from those which an Englishman expresses by those English ones; and much more is this the case in more abstract ideas, such as generally make up moral discourses. The reason why I take so particular notice of this is; that we may not be mistaken about genera and species, and their essences, as if they were things regularly made by nature, when they appear to be nothing but an artifice of the understanding for signifying such collections of ideas as it should have occasion to communicate by one general term.

The near relation that there is between species, essences, and their general name, will appear when we consider that it is the name that preserves those essences and gives them their lasting duration. What a vast variety of different ideas does the word *triumphus* hold together and deliver to us as one species! Without the name we might have had a description of what passed in that solemnity, but it is the word that holds

the different parts together in the unity of one complex idea. Suitable to this, we find, that men speaking of mixed modes seldom take any other for species of them, but such as are set out by name. For to what purpose should the memory charge itself with such compositions, unless it were by abstraction to make them general? And to what purpose make them general, unless that they might have names for the convenience of discourse?

Conformable also to what has been said of mixed modes, that they are the creatures of the understanding, we find that their names lead our thoughts to the mind, and no farther. When we speak of justice or gratitude, our thoughts terminate in the abstract ideas of those virtues; we consider the original patterns as being in the mind; and hence I think it is that these essences of the species of mixed modes are by a more particular name called notions, as by a peculiar right appertaining to the understanding.

Hence we may learn why the complex ideas of mixed modes are commonly more compounded and decomposed than those of natural substances; because they being the workmanship of the understanding for its own convenience, it often unites into one abstract idea things that in their nature have no coherence.

Another thing we may observe is, that the names of mixed modes always signify the real essences of their species; for these abstract ideas not being referred to the real existence of things, there is no supposition of any thing more signified by that name, but barely the complex idea the mind has formed.

This may also show us why for the most part the names of mixed modes are got, before the ideas they stand for are perfectly known. What one of a thousand ever frames the abstract idea of glory and ambition before he has heard the names of them? In simple ideas and substances I grant it is otherwise; which being such ideas as have a real existence and union in

nature, the ideas or names are got one before the other, as it happens.

What has been said here of mixed modes, is with very little difference applicable also to relations, which since every man himself may observe, I may spare myself the pains to enlarge on.

CHAPTER VI.

The Names of Substances.

The common names of substances, as well as other general terms, stand for sorts; that is, denote a common nature in several substances capable of being comprehended in one conception. The measure and boundary of each sort, whereby it is distinguished from others, is what we call its essence; so that every thing contained in that idea is essential to that sort. This I call the nominal essence, to distinguish it from that real constitution of substances on which depend the nominal essence and properties, and which may be called the real essence. The nominal essence of gold is a body yellow, of a certain weight, malleable, fusible, and fixed; the real essence is the constitution of the insensible parts of that body on which those qualities depend.

For though voluntary motion, with sense and reason joined to a body of a certain shape, be the complex idea of man, yet no one will say that that complex idea is the real essence and source of all those operations which are found in any individual of that sort. Had we such a knowledge of the constitution of man, as it is possible angels have, and as it is certain his Maker has, we should have quite another idea of his essence than that which is now contained in our definition of that species, be it what it will.

That essence is considered in particular beings no farther than as they are ranked into sorts, appears from hence; that take away the abstract ideas by which

we sort individuals, then the thought of any thing essential to them instantly vanishes. It is necessary for me to be as I am ; God and nature has made me so ; but there is nothing I have that is essential to me. A disease may alter my color, a fever may take away my memory or reason, an apoplexy leave neither sense, understanding, nor life. Other creatures of my shape may be made with better or worse faculties than I have ; and others may have reason in a shape different from mine. None of these are essential to the one or the other, or to any individual whatever, till the mind refers it to some sort or species of things. It is in reference to species that this or that quality is said to be essential. If it be asked, whether it be essential to me, or any particular being, to have reason ? I say, no ; no more than it is essential to this paper to have words on it. But if that particular being be to be counted of the sort man, then reason is essential, as it is essential to this paper to contain words if I will give it the name, Treatise.

Thus, if the idea of body be bare extension, then solidity is not essential to body. That therefore and that alone is considered as essential, which makes a part of the complex idea the name of a sort stands for, without which no particular thing can be reckoned of that sort, nor be entitled to that name.

I have often mentioned a real essence distinct from a nominal essence. By this real essence I mean the real constitution of a thing, which is the foundation of the properties that coexist with the nominal essence. But essence of this sort supposes a species. Supposing the nominal essence of gold to be a body of such color and weight, with malleability and fusibility, the real essence is the constitution on which these qualities and their union depend.

The next thing to be considered is, by which of those essences are substances determined into species : evidently by the nominal essence ; for it is impossible

that any thing should determine the sorts of things which we rank under general names, but that idea which that name is designed as a mark for; which is that, as has been shown, which we call the nominal essence.

And that the species of things to us are nothing but the ranking them under distinct names, according to the complex ideas in us, and not according to the real essence in them, is plain from hence; that we find many of the individuals that are ranked into one sort, have qualities depending on their real constitution, as different from one another, as from others from which they are accounted to differ specifically. But if things were distinguished into species by their real essences, it would be as impossible to find different properties in any two individual substances of the same species, as it is to find different properties in two circles or two equilateral triangles.

Nor indeed can we sort things by their real essences, because we know them not. There is not so contemptible a plant or animal that does not confound the most enlarged understanding. When we come to examine the stones we tread on or the iron we daily handle, we presently find that we can give no reason of their several qualities. What makes lead and iron malleable, antimony and stones not? And yet how infinitely these come short of the fine contrivances and unconceivable real essences of plants or animals, every one knows.

Those therefore who have been taught that the several species of substances had their distinct internal substantial forms, and that it was those forms which made the distinction of substances into their true species and genera, were led yet farther out of the way by having the mind set on fruitless inquiries after substantial forms wholly unintelligible.

That our ranking substances into species, consists in the nominal, not in the real essences, is farther evident

from our idea of spirits : for the mind can have no other notion of spirit, but by attributing the operations it finds in itself to a sort of beings without consideration of matter. And even the most advanced notion we have of God is but attributing the ideas we have got from reflexion to him, in an unlimited degree. From reflecting on ourselves we have got the ideas of existence, knowlege, power, and pleasure ; and joining infinity to each of them, we have the complex idea of an eternal, omniscient, omnipotent, infinitely wise and happy Being. And though we are told there are different species of angels, yet we know not how to frame distinct specific ideas of them ; not because the existence of more than one species of spirits is impossible, but because having no more simple ideas applicable to such beings, but those taken from ourselves, we can no otherwise distinguish the several species, but by attributing these powers to them in a lower or higher degree.

There may be many species of spirits diversified from one another by distinct properties whereof we have no ideas, as the species of sensible things are distinguished from one another by qualities which we know. That there should be more species of intelligent creatures above us than of material below us, is probable from hence, that in all the visible world we see no chasms. All down from us the descent is by easy steps. There are some brutes that seem to have as much knowlege and reason as some that are called men ; and the animal and vegetable kingdoms are so nearly joined, that if you take the lowest of the one and the highest of the other, there will scarcely be perceived any great difference between them ; and so on till we come to the lowest and most inorganical parts of matter. We have reason then to be persuaded that there are far more species of creatures above us than there are beneath, we being in degrees of perfection much more remote from the infinite being

of God, than we are from the lowest state of being, and that which approaches nearest to nothing.

But to return to the species of corporeal substances. If I were to ask whether air and water were two distinct species, I should be answered no doubt in the affirmative ; but if one bred in Jamaica, who had never seen ice, coming into England, should find the water that had been put into his basin at night frozen in the morning, would this be a new species to him ? It would not, any more than congealed jelly, when it is cold, is a distinct species from the same jelly fluid and warm. And if this be so, it is plain that our distinct species are nothing but distinct complex ideas with distinct names annexed to them.

To distinguish substantial beings into species, according to the supposition, that there are certain precise essences, or forms of things, whereby all the individuals existing are distinguished into species, it is necessary, 1. To be assured that nature designs things to partake of certain regulated established essences, the models of all things to be produced. 2. To know whether nature always attains that essence. Irregular births give us reason to doubt of one or both of these. 3. It ought to be determined whether monsters be really a distinct species ; for we find some of these productions have few of those qualities which are supposed to result from the essence of that species from whence they are derived. 4. The real essences which we distinguish into species ought to be known ; that is, we ought to have ideas of them. But since we are ignorant in these four points, the supposed real essences of things stand us not in stead for the distinguishing substances into species. 5. The only help in this case would be, that having framed perfect complex ideas of the properties of things from their real essences, we should thereby distinguish them into species : but being ignorant of the real essence, it is impossible to know the properties that flow from it. :

By all which it is clear, that our distinguishing substances into species by name is not founded on their real essences. But since we have need of general words, all we can do is to collect such a number of simple ideas as we find united in the things existing, and thereof to make one complex idea; which, though not the real essence, is yet the specific essence, to which the name belongs, and by which we may try the truth of these nominal essences. For instance, say that the essence of body is extension; then let us say that extension moves, and see how it will look. He that should say, that one extension by impulse moves another extension, would by the bare expression sufficiently show the absurdity of such a notion. Therefore the essence of body is not bare extension, but an extended solid thing; and to say that an extended solid thing moves or impels another, is as intelligible as to say body moves or impels.

There are creatures in the world that have shapes like ours, but are hairy, and want language and reason. There are naturals among us that have our shape, but want reason, and some of them language too. If it be asked whether these are men or no, the question refers only to the nominal essence; for those to whom the definition of the word man agrees are men, and the others not. But if the inquiry be made concerning the real essence, it is impossible for us to answer, no part of that going into our specific ideas.

Nor let any one say, that the power of propagation in animals, and in plants, keeps the supposed real species distinct and entire. For granting this to be true, it would help us in the distinction of the species of things no farther than the tribes of animals and vegetables. But even in these it is not sufficient.

On the whole, it is evident, that it is their own collections of sensible qualities that men make the essences of their several sorts of substances: their internal structures are not considered by the greatest part of

men ; much less were any substantial forms ever thought on by any but those who have learned the language of the schools.

But supposing that the real essence of substances were discoverable, yet we could not think, that ranking things under general names was regulated by any thing else but their obvious appearances ; since languages in all countries have been established long before sciences.

Since then it is evident that we sort and name substances by their nominal, and not by their real essences, it is next to be considered how and by whom these essences are made. They are evidently made by the mind : for were they made by nature, they could not be so various as they obviously are. If the abstract idea, to which the name of man is given, were of nature's making, it would not be to one *animal rationale*, and to another *animal implume, bipes, latis ungibus*. He that annexes the name man to a complex idea, made up of sense and spontaneous motion joined to a body of such a shape, has thereby one essence of the species man ; and he that adds rationality, has another essence of the species he calls man ; by which means the same individual will be a true man to the one, and not to the other. I think there is scarce any one will allow this upright figure, so well known, to be the essential difference of the species man ; and yet how far men determine of the sorts of animals, rather by their shape than descent, is very visible ; since it has been more than once debated whether several human fœtus should be preserved or received to baptism or no, only because of their outward configuration, from the ordinary make of children, without knowing whether they were not as capable of reason as infants cast in another mould.

Wherein then consist the precise and unmoveable boundaries of that species ? It is plain that there is no such thing made by nature. The real essence of that or any other sort of substances we know not, and

therefore are so undetermined in our nominal essences, that if several men were to be asked concerning some oddly-shaped foetus, as soon as born, whether it were a man or no, it is past doubt one should meet with different answers ; which could not happen, if the nominal essences were exactly copied from precise boundaries set by nature. I think I may say, that the certain boundaries of that species are so far from being determined, and the precise number of simple ideas so far from being settled, that material doubts may still arise about it.

But though these nominal essences of substances are made by the mind, they are not yet made so arbitrarily as those of mixed modes. To the making of any nominal essence it is necessary, 1. That the ideas whereof it consists have such an union as to make but one idea. 2. That the ideas so united be exactly the same, neither more or less : for if two abstract complex ideas differ in number or sorts of their component parts, they make two different, and not one and the same essence. In the first of these, the mind, in making its complex ideas of substances, only follows nature, and puts none together which are not supposed to have an union in nature. No one joins the voice of sheep with the shape of a horse ; or the color of lead, with the weight and fixedness of gold, to be complex ideas of real substances. Though the mind, in making its complex ideas of substances, never puts together any that are not supposed to coexist, yet the number it combines depends on the care, industry, or fancy of him that makes it. Men generally content themselves with some few obvious characters, leaving out others perhaps as material. In vegetables and animals, an extended solid substance of such a certain figure usually serves the turn : for however some men prize their definition of *animal rationale*, yet if Balaam's ass had, all his life, discoursed as rationally as he once did, I doubt whether any would have thought him worthy

the name man. As in vegetables and animals it is the shape, so in other bodies it is the color we most fix on and are led by. Thus, where we find the color of gold, we are apt to imagine all the other qualities compounded in our complex idea to be there also.

But though this serves for the usual way of talking, yet men are far from having agreed on the precise number of simple ideas or qualities belonging to any sort of things signified by its name: for most men wanting time or inclination for this, content themselves with some few obvious appearances of things, thereby to distinguish them for the common affairs of life. He that shall consider how few words we have yet any settled definitions of, may imagine that those forms, which there has been so much noise made about, are only chimeras which give us no light into the specific natures of things; and he that shall consider how far the names of substances are from having significations wherein all who use them do agree, will have reason to conclude, that though the nominal essences of substances are all supposed to be copied from nature, yet they are all or most of them very imperfect, since the compositions are different in different men. Many substances are so made by nature that they have an agreement with one another; but the sorting of things by us being in order to comprehend them under general terms, I cannot see how it can be said that nature sets the boundaries of the species of things. For having need of general names for present use, we divide things by certain obvious appearances into species, that we may under general names communicate our thoughts concerning them.

But however these species pass in conversation, it is plain that this complex idea is by different men made very differently. The yellow shining color makes gold to children; others add weight, malleableness, and fusibility; and others yet other qualities.

If the number of simple ideas that make the nominal

essence of the lowest species or first sorting of individuals depends on the mind variously collecting them, they do so much more in the comprehensive *classis* called *genera*. It is visible at first sight that several of those qualities that are to be found in the things themselves are purposely left out of generical ideas : for the mind, in making general ideas to comprehend different sorts, puts into its collection only such ideas as are common to several sorts. The same convenience that made men give the name of gold to several parcels of yellow matter coming from Peru and Guinea, sets them on making one name that may comprehend both gold and silver, and some other bodies ; which is done by leaving out qualities that are peculiar to each sort, and retaining a complex idea made up of those that are common to them all. So that in this whole business of genera and species, the genus is but a partial conception of what is in the species, and the species but a partial idea of what is to be found in each individual. In all these genera and species there is no new thing made, but only more or less comprehensive signs, whereby we may be enabled to express in a few syllables great numbers of particular things, as they agree in more or less general conceptions which we have framed to that purpose.

This is adjusted to the true end of speech, which is to be the easiest and shortest way of communicating our notions. Thus he that would discourse of things as they agreed in the complex idea of extension and solidity, needed only the word *body* ; he that would join others signified by the words *life*, *sense*, and *spontaneous motion*, needed but use the word *animal* ; and he that had a complex idea of a body with *life*, *sense*, and *motion*, with the faculty of reasoning and a certain shape joined to it, needed but use the short monosyllable *man*.

From what has been said, it is evident that men make sorts of things ; for it being different essences

alone that make different species, it is plain that they who make those abstract ideas, which are the nominal essences, do thereby make the species. This in short then is the case; Nature makes many particular things which do agree one with another in many sensible qualities; and men taking occasion from the qualities wherein they observe several individuals to agree, range them into sorts, in order to their naming, for the convenience of comprehensive signs.

From what has been said it will follow, that each abstract idea with a name to it makes a distinct species. How much the making of species and genera is in order to general names, and how much general names are necessary to the completing of a species, will appear in a very familiar example. A silent and a striking watch are but one species to those who have but one name for them; but he that has the name of watch for one and clock for the other, and distinct complex ideas, to which those names belong, to him they are different species. But if any one will make minuter divisions from differences that he knows in the internal frame of watches, and to such precise complex ideas give names that shall prevail, they will then be new species to them who have those ideas with names to them.

Hence we see the reason why, in the species of artificial things, there is generally less confusion and uncertainty than in natural; because an artificial thing being a production of man which the artificer designed, and therefore well knew the idea of, the name of it is supposed to stand for no other idea, nor to import any other essence, than what is certainly to be known and easy to be apprehended.

Artificial things are of a distinct species as well as natural; for they are plainly and orderly ranked into sorts with general names annexed to them, as distinct one from another as those of natural substances. This is farther to be observed concerning substances;

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that they alone, of all our several sorts of ideas, have proper names, whereby one only particular thing is signified; because in simple ideas, modes, and relations, it seldom happens that men have occasion to mention often this or that particular when it is absent. Besides, the greatest part of mixed modes, being actions which perish in their birth, are not capable of a lasting duration, as substances, which are the actors.

It is difficult to lead another by words into the thoughts of things stripped of those specific differences we give them; which things if I name not, I say nothing; and if I do name them, I rank them into some sort. Let me endeavor by an example to make the different consideration the mind has of specific names and ideas, a little more clear, and to show how the complex ideas of modes are referred sometimes to archetypes in the minds of others, and sometimes to no archetypes at all. Let me also show how the mind refers its ideas of substances, either to the substances themselves, or to the signification of their names.

Let us suppose Adam as a grown man, with all things new about him, and no other faculties but what one of this age has now. He observes Lamech to be melancholy, and imagines it to be from a suspicion that his wife has too much kindness for another man. Adam tells these thoughts to Eve, and desires her to take care that Adah commit not folly. In these discourses he makes use of two new words, *kinneah* and *niouph*. In time, Adam finds Lamech's trouble to proceed from having killed a man. But the two names, *kinneah* and *niouph*, the one standing for the husband's suspicion, and the other for the wife's disloyalty, lost not their significations. Here were two distinct complex ideas of mixed modes with names to them. Wherein consisted the essences of these two distinct species of action? It consisted in a precise combination of simple ideas, different in one from the other. The complex idea in Adam's mind which he

called *kinneah*, was adequate, because it was a combination of simple ideas, without regard to any archetype. His own choice having made that combination, it had in it all he intended it should.

These words, *kinneah* and *niouph*, by degrees grew into common use, and then the case was somewhat altered. Adam's children had the same power that he had to make complex ideas, and to make what sounds they pleased the signs of them : but the use of names being to make our ideas known to others, this can only be done when the same sign stands for the same idea in two who converse together. Those children of Adam, therefore, who found the two words *kinneah* and *niouph* in use, must conclude they stood for something. If therefore they would use the words as names of species already established, they were obliged to conform the ideas in their minds signified by these names, to the ideas they stood for in the minds of others, as to their patterns ; and then their ideas of these complex modes were liable to be inadequate, as not being conformable to the ideas in other men's minds using the same names.

Let us now consider, after the same manner, the names of substances. One of Adam's sons finds a glittering substance, which he carries to Adam, who finds it to be hard, of a yellow color, and great weight. These are all the qualities he first takes notice of, and he gives it the name of *zahab*. In this case Adam acts differently from what he did before, in forming those ideas of mixed modes to which he gave the name *kinneah* and *niouph*. For there he puts the ideas together only by his own imagination ; but in forming his idea of this new substance he has a standard made by nature ; and therefore he puts no simple idea into his complex one, but what he has the perception of from the thing itself. This piece of matter, denominated *zahab*, being different from any he had seen

before, nobody will deny to be a distinct species, and to have its peculiar essence. But the essence Adam made the name *zahab* stand for, was nothing but a body hard, shining, yellow, and very heavy. But not content with the knowledge of these qualities, he beats it, and finds it will yield to blows, but not easily separate into pieces. Ductility is now added to his former idea, and makes part of the essence of the species that the name *zahab* stands for. Farther trials discover fusibility and fixedness, which are also added to the complex idea. If these must be added, then must all other properties which farther trials may discover in it; which properties, because they are endless, it is plain that the idea made after this fashion will be always inadequate. It would also follow that the names of substances would be supposed to have different significations as used by different men: for if every distinct quality discovered in any matter were supposed to make a necessary part of the complex idea signified by the common name given it, it must follow that men must suppose the same word to signify different things in different men. To avoid this, therefore, they have supposed a real essence belonging to every species, and would have their name of the species stand for that. But having no idea of that real essence, their words signify nothing but the ideas they have; and that which is done by this attempt is only to put the name in the place of the thing. To conclude; what liberty Adam had at first to make any complex ideas of mixed modes by no other pattern but by his own thoughts, the same all men have had ever since; and the same necessity of conforming his ideas of substances to things without him, that Adam was under, the same are all men ever since under too.

CHAPTER VII.

Of Particles.

Besides words, which are the names of ideas in the mind, there are others made use of to signify the connexion that the mind gives to ideas or propositions one with another, and to intimate some particular action of its own at that time relating to those ideas. This it does several ways, as 'is,' 'is not,' are marks of the mind affirming or denying; besides which, the mind does, in declaring its sentiments to others, connect not only the parts of the proposition, but whole sentences one to another, with their several relations and dependences, to make a coherent discourse.

The words signifying that connexion the mind gives to several affirmations and negations that it unites in one continued reasoning or narration, are called particles; and it is in the right use of these that more particularly consists the clearness and beauty of a good style. To express the dependence of his thoughts and reasonings, one on another, a man must have words to show what connexion, restriction, distinction, opposition, emphasis, &c. he gives to each respective part of his discourse.

These cannot be understood rightly, without a clear view of the postures, stands, turns, limitations, exceptions, and several other thoughts of the mind. Of these there are a great variety, much exceeding the number of particles that most languages have to express them by; for which reason it happens, that most of these particles have divers, and sometimes almost opposite significations. Thus the particle 'but' in English has several very different, and sometimes almost opposite significations; as, 'But to say no more:' here it intimates a step of the mind in the course it was going, before it came to the end of it. 'I saw but two planets:' here it shows that the mind limits the sense to

what is expressed, with a negation of all other. 'You pray, but it is not that God would bring you to the true religion, but that he would confirm you in your own:' the former of these intimates a supposition in the mind of something otherwise than it should be; the latter shows that the mind makes a direct opposition between that and what goes before. 'All animals have sense; but a dog is an animal:' here it signifies the connexion of the latter proposition with the former. To these, divers other significations of this particle might be added, if it were my business to examine it in its full latitude.

I intend not here a full explication of this sort of signs: the instances I have given in this one, may give occasion to reflect on their use and force in language, and lead us into the contemplation of several actions of our minds in discoursing, which it has found a way to intimate to others by these particles, some whereof constantly, and others in certain constructions, have the sense of a whole sentence contained in them.

CHAPTER VIII.

Of abstract and concrete Terms.

The ordinary words of language, and our common use of them, would have given us light into the nature of our ideas, if they had been but considered with attention. The mind, as has been shown, has a power to abstract its ideas whereby the sorts of things are distinguished. Now each abstract idea being distinct, so that the one can never be the other, the mind will, by its intuitive knowledge, perceive their difference: and therefore in propositions, no two whole ideas can ever be affirmed one of another; nor does the common use of language permit that any two abstract words, or names of abstract ideas, should be affirmed one of another. All our affirmations are only inconcrete, which is the affirming one abstract idea to be

joined to another ; which abstract ideas, in substances, may be of any sort, though the most of them are of powers : in all the rest these are little else but relations.

All our simple ideas have abstract, as well as concrete names, as whiteness, white ; sweetness, sweet, &c. The like also holds in our ideas of modes and relations, as justice, just ; equality, equal, &c. But as to our ideas of substances, we have very few abstract names at all. Those few that the schools have forged, as *animalitas*, *humanitus*, &c. hold no proportion with the infinite number of names of substances, and could never get admittance into common use, or obtain the license of public approbation ; which seems to intimate the confession of all mankind, that they have no ideas of the real essences of substances, since they have not names for such ideas. It was only the doctrine of substantial forms, and the confidence of mistaken pretenders to a knowledge they had not, which first coined and then introduced *animalitas*, *humanitas*, and the like ; which yet went very little farther than their own schools, and could never get to be current amongst understanding men.

CHAPTER IX.

Of the Imperfection of Words.

From what has been said it may be perceived how the very nature of words makes it almost unavoidable for many of them to be of doubtful signification. To examine their perfection or imperfection, it is necessary to consider their use and end. We have, in a former part of this discourse, mentioned a double use of words ; one for recording our thoughts, and another for communicating them. For the recording our own thoughts any words will serve our turn : for since sounds are voluntary signs, man may use what words he pleases to signify to himself his own ideas ; and there will be

no imperfection in them, if he always use the same sign for the same idea.

2. Communication of words has also a double use, civil and philosophical. By their civil use, I mean such a communication of ideas as may serve for the ordinary affairs and conveniences of life. By their philosophical use, I mean such as may convey precise notions of things, and express satisfactorily general propositions. These uses are very distinct; less exactness being required in the one than in the other.

The chief end of language being to be understood, words serve not to that end when they do not excite in the hearer the same idea that they stand for in the mind of the speaker. Now since sounds have no natural connexion with our ideas, the uncertainty of their signification has its cause in the ideas they stand for; and therefore the idea which each sound stands for must be learned and retained by those who would discourse intelligibly. But this is hardest to be done, 1. where the ideas they stand for are very complex; 2. where the ideas they stand for have no certain connexion in nature, and no standard to adjust them by; 3. where the signification of the word is referred to a standard not easy to be known; 4. where the signification of the word, and the essence of the thing, are not exactly the same.

The names of mixed modes are liable to great obscurity: 1. Because of that great composition these complex ideas are often made up of. When a word stands for a very complex idea, it is not easy for men to form and retain that idea, so as to make the name stand for the same precise idea without variation. Hence names of compound ideas, such as moral words, have seldom, in two different men, the same precise signification. 2. Because the names of mixed modes want standards in nature. They are assemblages of ideas put together at the pleasure of the mind, not to copy any thing really existing, but to

weak things as they agree with the archetypes the mind has made. What the words murder, sacrilege, &c. signify, can never be known from the things themselves. Many parts of these complex ideas are not visible in the actions themselves: the intention of the mind, or the relation of holy things, has no necessary connexion with the outward action of him who commits either. They have their combination only from the understanding, which unites them under one name.

Common use, that is the rule of propriety, may be supposed to settle the signification of language, and it does for the purposes of common conversation; but common use is not sufficient to adjust them to philosophical discourses; there being scarcely any name of any very complex idea, which may not be made the sign of far different ideas. From which it is evident that the names of such ideas are liable to be of doubtful signification. Though the names glory and gratitude be the same in every man's mouth, yet the complex ideas which every one intends by those names, are different in men using the same language.

The way also in which the names of mixed modes are learned, contributes to the doubtfulness of their signification. To make children understand the names of simple ideas and substances, people show them the thing, and then repeat the name. But of mixed modes, especially moral words, the sounds are learned first, and their meaning is left to the explication of others or to their own observation and industry; which being little laid out in the search of the true meaning of names, these moral words, in most men's mouths, are little more than bare sounds. Where shall one find any controversial debate or familiar discourse concerning honor, faith, grace, religion, church, &c. wherein it is not easy to observe the different notions men have of them? And hence we see that in the interpretation of laws, whether divine or human, comments beget comments, and explications make new

matter for explications; and of limiting, distinguishing, varying the signification of these moral words, there is no end.

It is needless to remark what obscurity this has brought on the writings of men who have lived in remote ages and different countries, since the numerous volumes of learned men employing their thoughts that way are more than enough to show what attention and study are required to find the true meaning of ancient authors. But there being no writings we have any great concernment to be solicitous about, but those which contain truths to be believed or laws to be obeyed, we may be less anxious about the sense of other authors; and if they use not their words with a due clearness and perspicuity, we lay them aside, and resolve with ourselves,

Si non vis intelligi, debes negligi.

If the names of mixed modes are uncertain for want of standards existing in nature, the names of substances are doubtful for a contrary reason; because they are referred to standards made by nature. In these we must suit our complex ideas to real existences. Here we have patterns to follow; but patterns that will make the signification of their names very uncertain; for the names must be of doubtful meaning, if they be referred to standards, that either cannot be known at all, or can be known but imperfectly and uncertainly.

The names of substances have a double reference. 1. They are made to stand for the real constitution of things, from which all their properties flow. But this real constitution being unknown to us, any sound that is put to stand for it must be very uncertain in its application. 2. The simple ideas that are found in substances being that which their names immediately signify, are the proper standards to which their names are referred. But these archetypes still leave the names with uncertain significations; because the sim-

ple ideas united in the same subject being numerous, and having all an equal right to go into the complex idea, men frame very different ideas about it, and so the name they use comes to have very different significations. He that shall observe what alterations any one of the baser metals is apt to receive, will not think it strange that I count the properties of bodies not easy to be collected. The complex ideas of substances being made up of such simple ones as are supposed to co-exist in nature, every one has a right to put into his complex idea those qualities he has found to be united together. For though in the substance of gold one satisfies himself with color and weight, yet another thinks solubility in *aqua regia* as necessary to be joined to it: others put in fusibility, ductility, fixedness, &c. Each has his standard in nature; and what judge shall determine which of them has established the right signification of the word gold? From hence it follows that the complex ideas of substances will be very various, and the signification of their names uncertain. Besides, there is scarcely any thing which does not in some of its simple ideas communicate with a greater, and in others with a less number of particular beings; in which case who is to determine the collection of simple ideas to be signified by the name; or prescribe which obvious qualities are to be left out, or which more secret to be put into the signification? All which produces that doubtful signification in the names of substances, which causes uncertainty and disputes when we come to a philosophical use of them.

In common conversation, general names of substances, regulated by some obvious qualities, well enough design the things men would be understood to speak of; but in philosophical inquiries, where general truths are to be established, there the precise signification of the names of substances will be found not only not to be well established, but hard to be so. I was once at a meeting of physicians, when there arose a question

whether any liquor passed through the filaments of the nerves. The debate having been managed by a variety of arguments on both sides, I requested, that before they proceeded farther, they would first establish what the word liquor signified. They were at first surprised at the proposal, but on examination found that the signification of the word was not so settled as they imagined. This made them perceive that their dispute was about the signification of that term, and that they differed very little in their opinion concerning some subtle matter passing through the nerves, though it was not so easy to agree whether it was to be called liquor or no.

From what has been said, it is easy to observe that the names of simple ideas are least liable to mistakes; 1. because the ideas they stand for, being but one single perception, are more easily retained than the more complex ones; and, 2. because they are never referred to any other essence, but barely that perception they immediately signify. White, sweet, yellow, bitter, carry a very obvious meaning with them; but what precise collection of simple ideas, modesty, or frugality, stands for in another's use, is not so certainly known; and however we are apt to think we well enough know what is meant by gold or iron, yet the precise complex idea, others make them the signs of, is not so certain.

By the same rule, the names of simple modes are, next to those of simple ideas, least liable to doubt; and in general the least compounded ideas in every kind have the least dubious names.

The disorder that happens in our names of substances proceeding from our want of knowledge of their real constitutions, it may be wondered why I charge this rather on our words than understandings. I must confess, that when I began this discourse, I had not the least thought that any consideration of words was at all necessary to it. But when I began to examine the

extent and certainty of our knowlege, I found it had so near a connexion with words, that unless their force and manner of signification were first well observed, there could be very little said clearly and pertinently concerning knowlege, which being conversant about truth, had constantly to do with propositions. And though it terminated in things, it was through the intervention of words, which interpose themselves so much between our understandings and the truth, that like the medium through which visible objects pass, their obscurity does not seldom cast a mist before our eyes. The fallacies which men put on themselves and others, are in a great measure owing to words; and I am apt to imagine, that were the imperfection of language as an instrument of knowlege more thoroughly weighed, many controversies would cease.

The significations of words, depending much on the thoughts of him who uses them, must be of great uncertainty to men of the same language and country: but when to this natural difficulty shall be added different countries, and remote ages, wherein the speakers and writers had very different notions, tempers, customs, &c. every one of which influenced the signification of their words then, though now lost and unknown to us; it would become us to be charitable to one another in our interpretations and misunderstanding of those ancient writers, which, though of great concernment to be understood, are liable to the unavoidable difficulties of speech, which, with few exceptions, is not capable, without constantly defining the terms, of conveying the sense of the speaker without uncertainty to the hearer: and in discourses of religion, law, and morality, as they are of the highest concernment, so there will be the greatest difficulty.

The volumes of commentaries on the Old and New Testament are proofs of this. Though every thing said in the text be infallibly true, yet the reader is fallible in understanding it. Nor is it to be wondered

that the will of God, when clothed with words, should be liable to the uncertainty which attends that conveyance, when his Son clothed in flesh was liable to the inconveniences of human nature, sin excepted. And we ought to magnify his goodness, that he hath given to all mankind a light of reason, that they to whom this written word came not, could neither doubt of the being of a God or of the obedience due to him. Since, then, the precepts of natural religion are plain and very intelligible to mankind; and other revealed truths, which are conveyed to us in books and languages, are liable to the natural difficulties incident to words; it would become us to be more careful in observing the former, and less magisterial in imposing our own interpretations of the latter.

CHAPTER X.

Of the Abuse of Words.

Besides the natural imperfection of language, men are guilty of several wilful faults and neglects, whereby they render these signs less distinct in their signification than they need to be.

The first abuse is using words without clear and distinct ideas, or, which is worse, signs without any thing signified. Of these there are two sorts. 1. One may observe, in all languages, words that stand not for any clear ideas. These have been introduced by the several sects of philosophy and religion: for their promoters, to support some strange opinion, or to cover some weakness of their hypothesis, have coined new words, which, when examined, may justly be called insignificant terms; and when once they become the distinguishing characters of a church or school, few care to examine their precise signification. I need not heap up instances; every one's reading and conversation will sufficiently furnish him. 2. Others extend this abuse yet farther, that by an unpardonable

negligence they use words, to which language has fixed important ideas, without any meaning at all. Wisdom, glory, grace, &c. are words frequent enough in every man's mouth; but many who use them, if asked what they mean by them, would be at a loss what to answer.

Men having been accustomed to learn words before they know the things they are thought to stand for, continue to use their words for such confused notions as they have, contenting themselves with the same words that other people use, as if the sound carried with it of necessity the same meaning. And when, with this insignificancy of words, they come to reason concerning their tenets, their discourse is filled with noise and jargon. They have indeed one advantage:—as they seldom are in the right, so they are seldom to be convinced that they are in the wrong; it being all one to go about to draw these men out of their mistakes, as to dispossess a vagrant of his habitation.

Another great abuse of words is inconstancy in the use of them. It is hard to find a controversial discourse wherein the same words are not used sometimes for one collection of simple ideas, and sometimes for another; the wilful doing of which can be imputed to nothing but great folly or greater dishonesty. A man in his accounts might as well use characters that stand sometimes for one collection of units, and sometimes for another; but the former cheat is the greater, in proportion as truth is of more concern and value than money.

Another abuse is an affected obscurity, applying old words to new significations, or introducing new terms without defining them, or putting them so together as to confound their ordinary meaning. The Peripatetic philosophy has been most eminent in this way, but other sects have not been clear of it. Body and extension in common use obviously stand for two distinct ideas, yet there are those who find it neces-

sary to confound their signification. The admired art of disputing has added much to the natural imperfection of language, having been used more to perplex the signification of words than to discover truth: and if reputation and reward attend these conquests which depend on the niceties of words, it is no wonder if the wit of man so employed should perplex and involve the signification of sounds, so as never to want something to say in opposing or defending any question. This has hitherto passed under the names of subtilty and acuteness, and has had the applause of the learned men of the world; and no wonder, since the philosophers of old, and the schoolmen since aiming at glory and esteem, found this a good expedient to cover their ignorance. But these profound doctors were no wiser nor more useful to their neighbors, and brought but small advantage to the societies in which they lived. It was to unscholastic statesmen that the governments of the world owed their peace, defence, and liberties; and from the illiterate mechanic that they received the improvements of the useful arts. Nevertheless, this artificial ignorance prevailed in these last ages by the artifice of those who found no easier way to dominion than by amusing men of business with hard words, and employing the ingenious in idle disputes. And there is no such way to give admittance or defence to strange doctrines as to guard them with legions of obscure words: for untruth being unacceptable to the mind of man, there is no other defence left for absurdity but obscurity. This learned ignorance has much perplexed, while it has pretended to inform the understanding. Nor has the mischief stopped in logical niceties; it has invaded the great concerns of life, perplexed the truths of law and divinity, and in a great measure rendered useless the great rules of religion and justice. For doth it not often happen that a man of ordinary capacity very well understands a text or a law, till he consults an expositor, or goes to a council, who, by that

time he hath done explaining them, makes the words signify either nothing at all or what he pleases?

Whether any by-interests of these professions have occasioned this I will not here examine, but leave it to be considered whether it would not be well that the use of words were made plain and direct, and that language, which was given for the improvement of knowledge and the bond of society, should not be employed to darken truth, and unsettle people's rights; to raise mists, and render unintelligible both morality and religion.

Another great abuse of words is taking them for things. To this abuse those men are most subject who give themselves up to a firm belief in the perfection of any received hypothesis. What peripatetic philosopher does not think the ten names, under which are ranked the ten predicaments, to be exactly conformable to the nature of things? The Platonists have their soul of the world, and the Epicureans their endeavor towards motion in their atoms when at rest. There is scarcely any sect in philosophy that has not a distinct set of terms that others understand not.

How much names taken for things are apt to mislead the understanding, an attentive reading of philosophical writers would abundantly discover. I will give one familiar instance. How many disputes have there been about matter, as if it were something distinct from body! If the ideas these two terms stood for were precisely the same, they might be put for one another. We familiarly say one body is bigger than another; but it sounds harsh to say one matter is bigger than another: yet matter and body stand for two different conceptions, whereof one is incomplete, and but a part of the other. And, therefore, in speaking of matter, we speak of it always as one, because it contains nothing but the idea of a solid substance, which is every where uniform. We no more speak of different matters than we do of different soli-

dities. But since solidity cannot exist without extension and figure, the taking matter to be something really existing under that precision, has, no doubt, produced those unintelligible disputes which have filled the heads of philosophers concerning *materia prima*. We should have fewer disputes if words were taken for the signs of our ideas only, and not for the things themselves.

But whatever inconvenience follows from this mistake of words, they charm men into notions far remote from the truth of things. The words that men have been for a long time used to, remaining firm in their minds, it is no wonder that the wrong notions annexed to them should not be removed.

There is also an abuse of words in setting them in the place of things, which they do or can, by no means, signify. In the general names of substances, whereof the nominal essences only are known to us, when we affirm or deny any thing concerning them, we intend they should stand for the real essence of a certain sort of substances. Thus, when we say that *animal rationale* is, and *animal implume, bipes, latis unguibus*, is not, a good definition of man, we suppose the name man in this case to stand for the real essence of a species, and would signify that a rational animal better described that real essence, than a two-legged animal with broad nails, and without feathers. It is for want of those real essences that our words convey so little knowledge in our discourses about them: and, therefore, the mind, to remove that imperfection, makes them to stand for a thing having that real essence; which is so far from diminishing the imperfection of our words, that by a plain abuse it adds to it, when we would make them stand for something, which, not being in our complex idea, the name we use can no ways be the sign of.

This shows us the reason why, in mixed modes, any of the ideas that make the composition of the complex

one being left out, or changed, it is allowed to be another thing, as is plain in chance medley, manslaughter, murder, parricide. But in substances it is not so; for though in that called gold, one puts into his complex idea what another leaves out, yet men do not think that therefore the species is changed; because they refer that name, and suppose it annexed to a real immutable essence of a thing existing, on which these properties depend.

That which disposes men to substitute their names for the real essences of species, is the supposition that nature sets boundaries to each of the species, by giving the same internal constitution to each individual which we rank under one general name: whereas; any one who observes their different qualities, can hardly doubt that many of the individuals called by the same name, are, in their internal constitution, as different one from another, as several of those which rank under a different specific name.

In this way of using the names of substances, there are these false suppositions contained: 1. that there are certain precise essences, according to which nature makes all particular things, and by which they are distinguished into species; 2. this also insinuates as if we had ideas of these proposed essences, which we certainly have not.

There remains to be noticed one more abuse of words, and that is, that men are apt to imagine so near a connexion between the names and the signification they use them in, that they suppose one cannot but understand what their meaning is. It is hard to name a word which will not be a clear instance of this. Life is a term, none more familiar. Any one would take it as an affront to be asked what he meant by it; and yet if it comes in question whether a plant that lies ready formed in the seed have life, whether the embryo of an egg before incubation, or a man in a swoon, without sense or motion, be alive or

no; it is easy to perceive that a clear, distinct idea does not always accompany the use of so known a word as that of life is. Some gross and confused conceptions men ordinarily have, to which they apply the common words of their language, and such a loose use of words serves them well enough in their ordinary affairs; but this is not sufficient for philosophical purposes. The multiplication and obstinacy of disputes, which has so laid waste the intellectual world, is owing to nothing more than to this ill use of words.

Since wit and fancy find easier entertainment in the world than dry truth and real knowlege, figurative speeches and allusions in language will hardly be admitted as an imperfection, or abuse of it. I confess, in discourses, where we seek rather pleasure and delight than information and improvement, such ornaments as are borrowed from them can scarcely pass for faults. But yet if we would speak of things as they are, we must allow that all the art of rhetoric, besides order and clearness, all the artificial and figurative application of words eloquence has invented, are for nothing else but to insinuate wrong ideas, move the passions, and thereby mislead the judgment, and so indeed are perfect cheats: and, therefore, however laudable and allowable oratory may render them in harangues and popular addresses, they are certainly, in all discourses that pretend to inform or instruct, wholly to be avoided; and where truth and knowlege are concerned, cannot but be thought a great fault, either of the language or person that makes use of them. What and how various they are, will be superfluous here to take notice: the books of rhetoric which abound in the world will instruct those who want to be informed. Only I cannot but observe how little the preservation and improvement of truth and knowlege is the care and concern of mankind; since the arts of fallacy are endowed and preferred. It is

evident how much men love to deceive and be deceived, since rhetoric, that powerful instrument of error and deceit, has its established professors, is publicly taught, and has always been had in great reputation; and I doubt not, but it will be thought great boldness, if not brutality, in me to have said thus much against it. Eloquence, like the fair sex, has too prevailing beauties in it, to suffer itself ever to be spoken against; and it is in vain to find fault with those arts of deceiving, wherein men find pleasure to be deceived.

CHAPTER XI.

Of the Remedies of the foregoing Imperfections and Abuses.

Speech being the bond that holds society together, and the conduit whereby the improvements of knowledge are conveyed from one man and one generation to another, it well deserves our serious thoughts to consider what remedies are to be found for the inconveniences above mentioned.

No one can attempt the perfect reforming of language without rendering himself ridiculous. To require that men should use their words for none but determined and uniform ideas, would be to think that all men should have the same notions, and talk of nothing but what they have distinct ideas of.

But though the market and exchange must be left to their own ways of talking, though the schools would take it amiss to have the number of their disputes lessened, yet they who pretend to search after truth should study how to deliver themselves without obscurity or equivocation.

For he that shall consider the errors that are spread in the world by an ill use of words, will find reason to doubt whether language has contributed more to the improvement than the hinderance of knowledge. How many are there, that when they would think on things,

fix their thoughts only on words ! This inconvenience men suffer in their own private meditations, but more manifest are the disorders that follow from it in discourse. He that uses words without any clear meaning, leads himself and others into error : he that does it designedly, ought to be looked on as an enemy to truth and knowledge. Yet, who can wonder that all the parts of knowledge have been overcharged with equivocal terms, since subtlety in those who make it a profession to teach truth hath passed so much for a virtue ?

In books of controversy we shall see that the effect of obscure or equivocal terms is nothing but noise and wrangling about sounds. That subtlety which has been so much admired, consisting mostly in the illusory use of obscure terms, is only fit to make men more conceited in their ignorance, and more obstinate in their errors. The learning of disputation consists in the vain ostentation of sounds. When I see a controversialist strip all his terms of ambiguity and obscurity, I shall think him a champion for knowledge, truth, and peace, and not the slave of vain-glory, ambition, or a party.

To remedy the defects before mentioned, the following rules may be of some use :—1. A man should take care to use no word without a signification. This rule will not seem needless to any one who shall recollect how often he has met with such words as, instinct, sympathy, antipathy, &c. so made use of, as he might conclude that those who used them had no ideas in their minds to which they applied them.

2. It is not enough that a man uses his words as signs of some ideas : those ideas, if simple, must be clear ; if complex, determinate, i. e. the precise collection of simple ideas settled in the mind with that sound annexed to it, as the sign of that precise determined collection, and no other. This is especially necessary in moral words. Justice is a word in every man's mouth,

but commonly with a very loose signification; which will always be so, unless a man has a distinct comprehension of the component parts that complex idea consists of. If one who makes this complex idea of justice to be such a treatment of the person or goods of another as is according to law, hath not a distinct idea of what law is, it is plain his idea of justice will be confused and imperfect. This exactness may be judged very troublesome; but till this be done, there will be obscurity in our minds and wrangling in our discourses.

In the names of substances something more is required than determined ideas; the names must be conformable to things that exist. This is absolutely necessary in philosophical discourses, and it would be well if it extended itself to common conversation.

3. It is not enough that men have determined ideas, but they must also take care to apply their words, as near as may be, to such ideas as common use has annexed them to: for words being the common measure of communication, it is not for any one at pleasure to change the stamp they are current in; or, at least, when there is necessity to do so, he is bound to give notice of it. Propriety of speech is that which gives our thoughts entrance into other men's minds with the greatest ease and advantage, and therefore deserves some part of our care and study, especially in moral words.

4. But because common use has not so visibly annexed any signification to words, so as to make men certainly know what they stand for; and because men, in the improvement of their knowledge, come to have ideas different from the received ones, for which they must either make new words or use old ones in a new signification; it is therefore necessary for the ascertaining the signification of words to declare their meaning, where the term is liable to any mistake. And this may be done in three ways.

1. When a man uses the name of a simple idea, which may be misunderstood, he ought to declare his meaning. Now this cannot be done by definition; and therefore, when a synonymous word fails to do it, there is but one of these ways left:—1. Either naming the subject in which that simple idea is to be found; as to make a man understand what *feuille morte* color signifies, it may suffice to tell him it is the color of withered leaves. 2. But the only sure way is by presenting to his senses that subject that may produce it in his mind.

2. Mixed modes, especially those belonging to morality, being combinations of the mind, whereof patterns are not always to be found existing, the signification of their names cannot be made known by showing, but may be perfectly defined: for, being combinations that the mind has put together without reference to archetypes, men may exactly know the ideas that go to each composition, and so use the words in a certain signification. On this ground I think that morality is capable of demonstration as well as mathematics, since the essence of things moral words stand for may be perfectly known, and the congruity or incongruity be certainly discovered. Nor let any one object that obscurity may arise from the names of substances made use of in morality: for in moral discourses the natures of substances are not inquired into, but only supposed; v. g. when we say man is subject to law, we mean nothing by man but a corporeal rational creature; the real essence of other qualities of that creature is in no way considered. The names of substances no more disturb moral than they do mathematical discourses, where, if a mathematician speaks of a cube of gold, he has his clear settled idea which varies not, though it may by mistake be applied to a body to which it belongs not. This I have mentioned to show of what consequence it is for men in their moral discourses to

define their words, since a definition is the only way whereby the precise meaning of moral words can be known : and therefore the perverseness of mankind cannot be excused, if their discourses in morality be not clearer than those in natural philosophy, since they are about ideas in the mind, none of which are false or disproportionate. It is easier to frame an idea which shall be the standard of the name justice, than, having seen Aristides, to frame an idea that shall in all things be exactly like him. The necessity of defining moral words is farther shown, in that it is the only way whereby the signification of most of them can be certainly known : for the ideas they stand for existing together only in the mind, it is only by words enumerating the several simple ideas which the mind has united, that we can make known to others what their names stand for.

3. For the explaining the signification of the names of substances, both the before-mentioned ways of showing and defining are, in many cases, requisite ; for there being in each sort some leading qualities, to which we suppose the other ideas, which make up our complex idea of that species, annexed, we give the specific name to that wherein the specific mark is found. Now these leading sensible qualities make the chief ingredients in our specific ideas, and are the most invariable part in the definitions of our specific names. For though the sound man be apt to signify a complex idea made up of animality and rationality, yet the outward shape is as necessary to be taken into our complex idea signified by the word man, as any other we find in it : for it is shape, as the leading quality, that seems more to determine that species than a faculty of reason, that appears not at first, and in some never. Now these leading qualities can be best made known by showing, and can hardly be made known otherwise. But because many of the simple ideas that make up our specific ideas of

substances, are powers which lie not obvious to our senses, some part of the signification will be better made known by enumerating those simple ideas than by showing the substance itself. For he that to the color of gold shall have the ideas of ductility, fusibility, fixedness, &c. added by my enumerating them, will have a perfecter idea of gold, than he can by seeing it.

Hence we may take notice how much the foundation of our knowledge of corporeal things lies in our senses: for how spirits separate from bodies know them we have no notion at all. The extent of our knowledge or imagination reaches not beyond our own ideas, limited to our ways of perception.

4. But though definitions serve to explain the names of substances as they stand for our ideas, yet they leave them not without imperfection, as they stand for things: for our names of substances being put to represent things, must agree with the truth of things; and we must not always rest in the ordinary complex idea received as the signification of that word, but must inquire into the properties of the things themselves. This is necessary to be done by all who search after knowledge and philosophical verity, in that children being taught words whilst they have an imperfect notion of things, apply them without much thinking, and seldom frame determined ideas to be signified by them, which custom they are apt to continue when they are men. Whence it comes to pass, that men speaking grammatically the language of their country, speak very improperly of things themselves, and in their arguments make small progress in the discovery of truth.

If men versed in physical inquiries would set down those simple ideas wherein they observe individuals of each sort to agree, this would prevent the confusion of several persons applying the same name to a collection of a smaller or greater number of sensible qualities, proportionably as they have been more or less ac-

quainted with the qualities of things which come under one denomination. But men dispute in words, the meaning of which is not agreed between them, out of a mistake that the significations of common words are certainly established, and that it is a shame to be ignorant of them. Both which suppositions are false; no names of complex ideas having so determined significations, that they are constantly used for the same precise ideas; nor is it a shame for a man not to have a certain knowledge of any thing but by the necessary ways of attaining it; and so it is no discredit not to know what precise idea any sound stands for in another man's mind, without he declare it to me by some other way than barely using that sound, there being no other way, without such a declaration, certainly to know it.

5. If men will not be at the pains to declare the meaning of their words, yet in all discourses, wherein one man pretends to instruct another, he should use the same word constantly in the same sense. But after all, the provision of words is so scanty in respect to the infinite variety of thoughts, that men, notwithstanding their utmost caution, will be often forced to use the same word in different senses; yet the import of the discourse will, if there be no designed fallacy, lead an intelligent reader into the true meaning of it; but where that is not sufficient to guide the reader, then it concerns the writer to explain his meaning, and show in what sense he there uses the term.

BOOK IV.

CHAPTER I.

Of Knowledge in general.

SINCE the mind hath no immediate object of thought but its own ideas, it is evident that our knowledge is only conversant about them. Knowledge seems to me to consist in the perception of the connexion and agreement, or disagreement and repugnancy of any of our ideas: for when we know that white is not black, what do we else but perceive that these two ideas do not agree? And when we know that the three angles of a triangle are equal to two right ones, what do we more but perceive their equality to two right ones?

¹ The placing of certainty, as Mr. Locke does, in the perception of the agreement or disagreement of our ideas, the bishop of Worcester suspects may be of dangerous consequence to that article of faith which he has endeavored to defend: to which Mr. Locke answers: 'Since your lordship hath not, as I remember, shown, or gone about to show, how this proposition, viz. that certainty consists in the perception of the agreement or disagreement of two ideas, is opposite or inconsistent with that article of faith which your lordship has endeavored to defend; it is plain, it is but your lordship's fear, that it may be of dangerous consequence to it, which, as I humbly conceive, is no proof that it is any way inconsistent with that article.'

'Nobody, I think, can blame your lordship, or any one else, for being concerned for any article of the Christian faith; but if that concern (as it may, and as we know it has done) makes any one apprehend danger where no danger is, are we, therefore, to give up and condemn any proposition, because any one, though of the first rank and magnitude, fears it may be of dangerous consequence to any truth of religion, without showing that it is so? If such fears be the measures whereby to judge of truth and falsehood, the affirming that there are antipodes would be still a heresy; and the doctrine of the motion of the earth must be rejected, as overthrowing the truth of the Scripture; for of that

To understand this more distinctly, we may reduce it to four sorts:—1. identity, or diversity; 2. relation;

dangerous consequence it has been apprehended to be, by many learned and pious divines, out of their great concern for religion. And yet, notwithstanding those great apprehensions of what dangerous consequence it might be, it is now universally received by learned men, as an undoubted truth; and writ for by some, whose belief of the Scripture is not at all questioned; and particularly, very lately, by a divine of the Church of England, with great strength of reason, in his wonderfully ingenious *New Theory of the Earth*.

'The reason your lordship gives of your fears, that it may be of such dangerous consequence to that article of faith which your lordship endeavors to defend, though it occur in more places than one, is only this, viz. That it is made use of by ill men to do mischief, i. e. to oppose that article of faith which your lordship hath endeavored to defend. But, my lord, if it be a reason to lay by any thing as bad, because it is, or may be, used to an ill purpose, I know not what will be innocent enough to be kept. Arms, which were made for our defence, are sometimes made use of to do mischief; and yet they are not thought of dangerous consequence for all that. Nobody lays by his sword and pistols, or thinks them of such dangerous consequence as to be neglected or thrown away, because robbers, and the worst of men, sometimes make use of them to take away honest men's lives or goods. And the reason is, because they were designed, and will serve, to preserve them. And who knows but this may be the present case? If your lordship thinks, that placing of certainty in the perception of the agreement or disagreement of ideas, be to be rejected as false, because you apprehend it may be of dangerous consequence to that article of faith; on the other side, perhaps others, with me, may think it a defence against error, and so (as being of good use) to be received and adhered to.

'I would not, my lord, be hereby thought to set up my own, or any one's judgment against your lordship's. But I have said this only to show, whilst the argument lies for or against the truth of any proposition, barely in an imagination that it may be of consequence to the supporting or overthrowing of any remote truth; it will be impossible, that way, to determine of the truth or falsehood of that proposition. For imagination will be set up against imagination, and the stronger probably will be against your lordship; the strongest imaginations being usually in the weakest heads. The only way, in this case, to put it past doubt, is to show the inconsistency of the two propositions; and then it will be seen, that one overthrows the other; the true, the false one.

'Your lordship says, indeed, this is a new method of certainty. I will not say so myself, for fear of deserving a second reproof from your lordship, for being too forward to assume to myself the honor of being an original. But this, I think, gives

3. co-existence, or necessary connexion; 4. real existence.

1. It is the first act of the mind to perceive its ideas,

me occasion, and will excuse me from being thought impertinent, if I ask your lordship whether there be any other, or older, method of certainty, and what it is? For if there be no other, nor older than this, either this was always the method of certainty, and so mine is no new one; or else the world is obliged to me for this new one, after having been so long in the want of so necessary a thing as a method of certainty. If there be an older, I am sure your lordship cannot but know it; your condemning mine as new, as well as your thorough insight into antiquity, cannot but satisfy every body that you do. And therefore to set the world right in a thing of that great concernment, and to overthrow mine, and thereby prevent the dangerous consequences there is in my having unreasonably started it, will not, I humbly conceive, misbecome your lordship's care of that article you have endeavored to defend, nor the good-will you bear to truth in general. For I will be answerable for myself, that I shall; and I think I may be for all others, that they all will give off the placing of certainty in the perception of the agreement or disagreement of ideas, if your lordship will be pleased to show that it lies in any thing else.

But truly, not to ascribe to myself an invention of what has been as old as knowledge is in the world, I must own I am not guilty of what your lordship is pleased to call starting new methods of certainty. Knowledge, ever since there has been any in the world, has consisted in one particular action in the mind; and so, I conceive, will continue to do to the end of it. And to start new methods of knowledge, or certainty (for they are to me the same thing), i. e. to find out and propose new methods of attaining knowledge, either with more ease and quickness, or in things yet unknown, is what I think nobody could blame; but this is not that which your lordship here means, by new methods of certainty. Your lordship, I think, means by it, the placing of certainty in something, wherein either it does not consist, or else wherein it was not placed before now; if this be to be called a new method of certainty. As to the latter of these, I shall know whether I am guilty or no, when your lordship will do me the favor to tell me wherein it was placed before; which your lordship knows I professed myself ignorant of, when I writ my book; and so I am still. But if starting new methods of certainty be the placing of certainty in something wherein it does not consist; whether I have done that or no, I must appeal to the experience of mankind.

There are several actions of men's minds, that they are conscious to themselves of performing, as willing, believing, knowing, &c. which they have so particular a sense of, that they can distinguish them one from another; or else they could not say,

and to know each what it is, and to perceive that one is not another. Without this there could be no knowledge, reasoning, imagination, or distinct thoughts at all.

when they willed, when they believed, and when they knew any thing. But though these actions were different enough from one another, not to be confounded by those who spoke of them, yet nobody, that I have met with, had, in their writings, particularly set down wherein the act of knowing precisely consisted.

'To this reflection on the actions of my own mind, the subject of my Essay concerning Human Understanding naturally led me; wherein if I have done any thing new, it has been to describe to others, more particularly than had been done before, what it is their minds do when they perform that action which they call knowing; and if, on examination, they observe I have given a true account of that action of their minds in all the parts of it, I suppose it will be in vain to dispute against what they find and feel in themselves. And if I have not told them right and exactly what they find and feel in themselves, when their minds perform the act of knowing, what I have said will be all in vain; men will not be persuaded against their senses. Knowledge is an internal perception of their minds; and if, when they reflect on it, they find that it is not what I have said it is, my groundless conceit will not be hearkened to, but be exploded by every body, and die of itself; and nobody need to be at any pains to drive it out of the world. So impossible is it to find out, or start new methods of certainty, or to have them received if any one places it in any thing but in that wherein it really consists; much less can any one be in danger to be misled into error, by any such new, and to every one visibly, senseless project. Can it be supposed, that any one could start a new method of seeing, and persuade men thereby, that they do not see what they do see? Is it to be feared that any one can cast such a mist over their eyes, that they should not know when they see, and so be led out of their way by it?

'Knowledge, I find in myself, and I conceive in others, consists in the perception of the agreement or disagreement of the immediate objects of the mind in thinking, which I call ideas; but whether it does so in others or no, must be determined by their own experience, reflecting on the action of their mind in knowing; for that I cannot alter, nor, I think, they themselves. But whether they will call those immediate objects of their minds in thinking, ideas or no, is perfectly in their own choice. If they dislike that name, they may call them notions or conceptions, or how they please; it matters not, if they use them so as to avoid obscurity and confusion. If they are constantly used in the same and a known sense, every one has the liberty to please himself in his terms; there lies neither truth, nor error, nor science, in that: though those that take them for things, and not for what they are, bare arbitrary signs of our ideas, make a great deal ado often about

This the mind does without labor and deduction; but at first view, by its natural power of perception and distinction. A man infallibly knows, as soon as ever

them; as if some greater matter lay in the use of this or that sound. All that I know, or can imagine, of difference about them, is that those words are always best, whose significations are best known in the sense they are used; and so are least apt to breed confusion.

'My lord, your lordship hath been pleased to find fault with my use of the new term, ideas, without telling me a better name for the immediate objects of the mind in thinking. Your lordship also has been pleased to find fault with my definition of knowledge, without doing me the favor to give me a better: for it is only about my definition of knowledge, that all this stir concerning certainty is made. For, with me, to know, and to be certain, is the same thing; what I know, that I am certain of; and what I am certain of, that I know. What reaches to knowledge, I think may be called certainty; and what comes short of certainty, I think cannot be called knowledge; as your lordship could not but observe in the 18th section of chap. iv. of my 4th book, which you have quoted.

'My definition of knowledge stands thus: 'Knowledge seems to me to be nothing but the perception of the connexion and agreement, or disagreement and repugnancy, of any of our ideas.' This definition your lordship dislikes, and apprehends it may be of dangerous consequence as to that article of Christian faith which your lordship hath endeavored to defend. For this there is a very easy remedy; it is but for your lordship to set aside this definition of knowledge by giving us a better, and this danger is over. But your lordship chooses rather to have a controversy with my book for having it in it, and to put me on the defence of it; for which I must acknowledge myself obliged to your lordship for affording me so much of your time, and for allowing me the honor of conversing so much with one so far above me in all respects.

'Your lordship says, it may be of dangerous consequence to that article of Christian faith which you have endeavored to defend. Though the laws of disputing allow bare denial as a sufficient answer to sayings, without any offer of a proof; yet, my lord, to show how willing I am to give your lordship all satisfaction, in what you apprehend may be of dangerous consequence in my book, as to that article, I shall not stand still sullenly, and put your lordship on the difficulty of showing wherein that danger lies; but shall, on the other side, endeavor to show your lordship that that definition of mine, whether true or false, right or wrong, can be of no dangerous consequence to that article of faith. The reason which I shall offer for it is this, because it can be of no consequence to it at all.

'That which your lordship is afraid it may be dangerous to, is an article of faith that which your lordship labors and is con-

he has them in his mind, that the ideas he calls white and round are the very ideas they are, and that they are not other ideas which he calls red or square.

cerned for, is the certainty of faith. Now, my lord, I humbly conceive the certainty of faith, if your lordship thinks fit to call it so, has nothing to do with the certainty of knowledge; as to talk of the certainty of faith, seems all one to me, as to talk of the knowledge of believing, a way of speaking not easy to me to understand.

'Place knowledge in what you will; start what new methods of certainty you please, that are apt to leave men's minds more doubtful than before; place certainty on such grounds as will leave little or no knowledge in the world (for these are the arguments your lordship uses against my definition of knowledge); this shakes not at all, nor in the least concerns, the assurance of faith; that is quite distinct from it, neither stands nor falls with knowledge.'

'Faith stands by itself, and on grounds of its own; nor can be removed from them, and placed on those of knowledge. Their grounds are so far from being the same, or having any thing common, that when it is brought to certainty, faith is destroyed; it is knowledge then, and faith no longer.

'With what assurance soever of believing I assent to any article of faith, so that I steadfastly venture my all on it, it is still but believing. Bring it to certainty, and it ceases to be faith. 'I believe that Jesus Christ was crucified, dead, and buried, rose again the third day from the dead, and ascended into heaven:' let now such methods of knowledge or certainty be started, as leave men's minds more doubtful than before; let the grounds of knowledge be resolved into what any one pleases, it touches not my faith; the foundation of that stands as sure as before, and cannot be at all shaken by it; and one may as well say, that any thing that weakens the sight, or casts a mist before the eyes, endangers the hearing; as that any thing which alters the nature of knowledge (if that could be done) should be of dangerous consequence to an article of faith.

'Whether then I am, or am not mistaken, in the placing certainty in the perception of the agreement or disagreement of ideas; whether this account of knowledge be true or false, enlarges or straitens the bounds of it more than it should; faith stands still on its own basis, which is not at all altered by it; and every article of that has just the same unmoved foundation, and the very same credibility, that it had before. So that, my lord, whatever I have said about certainty, and how much soever I may be out in it, if I am mistaken, your lordship has no reason to apprehend any danger to any article of faith from thence; every one of them stands on the same bottom it did before, out of the reach of what belongs to knowledge and certainty. And thus

Locke.

R

2. The next sort of agreement or disagreement is the perception of the relation between any two ideas: for since all distinct ideas must be known not to be the same, there could be no room for any positive knowledge at all if we could not perceive any relation between our ideas, and find out the agreement or disagreement they have one with another.

3. The third sort of agreement or disagreement to be found in our ideas is co-existence, or non-co-existence, and this belongs particularly to substances. Thus, when we say of gold that it is fixed, our knowledge amounts to no more but this, that fixedness is an idea that always accompanies that sort of yellowness, weight, fusibility, &c. which make our complex idea of gold.

4. The last sort is that of actual real existence, agreeing to any ideas. Within these four sorts of agreement or disagreement is contained all the knowledge we are capable of. I should now proceed to examine the several degrees of our knowledge; but it is necessary first to consider the different acceptations of the word knowledge.

There are several ways wherein the mind is possessed of truth, each of which is called knowledge. There is actual knowledge, which is the present view the mind has of the agreement or disagreement of any of its ideas, or of the relation they have one to another. A man is said to know any thing which, having been once laid before his thoughts, he perceived the agreement or disagreement of the ideas whereof it consists; and so lodged it in his memory, that when the proposition comes to be reflected on he assents to it without hesitation. This may be called habitual knowledge. Thus a man may be said to know all the truths

much of my way of certainty by ideas; which, I hope, will satisfy your lordship how far it is from being dangerous to any article of the Christian faith whatsoever.

that are lodged in his memory : for if men had no knowledge of any thing more than they actually thought on, they would be very ignorant ; and he that knew most would know but one truth at a time.

There are two sorts of habitual knowledge : the one is of such truths laid up in the memory, as whenever they occur to the mind, it actually perceives the relation between the ideas ; and the other is of such truths, whereof the mind having been convinced, it retains the memory of the conviction, without the proofs. Thus a man remembering that he once perceived the demonstration, that the three angles of a triangle are equal to two right ones, is certain that he knows it. Though, in adherence to a truth, where the demonstration is forgotten, a man may be thought to believe his memory, rather than to know ; yet, on due examination, I find it comes not short of certainty, and is in effect true knowledge. That which is apt to lead to a mistake is, that the agreement or disagreement of the ideas in this case is not perceived as it was at first, by actual view, but by other intermediate ideas. For example, in the proposition that the three angles of a triangle are equal to two right ones—one who has seen the demonstration of this truth knows it to be true, when the demonstration is gone out of his mind ; but he knows it in a different way. He remembers, i. e. he knows, that he was once certain of the truth of the proposition. The immutability of the same relation between the same immutable things is now the idea that shows him that, if the three angles of a triangle were once equal to two right ones, they will always be so. On this ground particular demonstrations in mathematics afford general knowledge. But because the memory is not always so clear as actual perception, and does in all men more or less decay in length of time, this, amongst other differences, is one, which shows that demonstrative knowledge is much more im-

perfect than intuitive, as we shall see in the following chapter.

CHAPTER II.

Of the Degrees of our Knowledge.

All our knowledge consisting in the view the mind has of its own ideas, which is the utmost light and greatest certainty we are capable of, the different clearness of our knowledge seems to lie in the different way of perception the mind has of the agreement or disagreement of any of its ideas.

When the mind perceives this agreement or disagreement of two ideas immediately by themselves, without the intervention of any other, we may call it intuitive knowledge, in which cases the mind perceives truth as the eye does light, only by being directed towards it. Thus the mind perceives that white is not black, that three are more than two, and equal to one and two. This part of knowledge is irresistible, and, like the bright sunshine, forces itself immediately to be perceived, as soon as ever the mind turns its view that way. It is on this intuition that depends all the certainty and evidence of our other knowledge; which certainty every one finds to be so great, that he cannot imagine, and therefore not require a greater.

The next degree of knowledge is, where the mind perceives not this agreement or disagreement immediately, or by the juxtaposition, as it were, of the ideas, because those ideas, concerning whose agreement or disagreement the inquiry is made, cannot by the mind be so put together as to show it. In this case the mind is fain to discover the agreement or disagreement which it searches, by the intervention of other ideas; and this is that which we call reasoning. And thus, if we would know the agreement or disagreement in bigness, between the three angles of a triangle and two right angles, we cannot by an im-

mediate view and comparing them do it; because the three angles of a triangle cannot be brought at once and be compared with any other one or two angles; so of this the mind has no immediate or intuitive knowlege. But we must find out some other angles; to which the three angles of a triangle have equality, and finding those equal to two right ones, we come to know the equality of these three angles to two right ones. Those intervening ideas which serve to show the agreement of any two others are called proofs; and where the agreement or disagreement is by this means plainly and clearly perceived, it is called demonstration. A quickness in the mind to find those proofs, and to apply them right, is, I suppose, that which is called sagacity.

This knowlege, though it be certain, is not so clear and evident as intuitive knowlege. It requires pains and attention, and steady application of mind, to discover the agreement or disagreement of the ideas it considers, and there must be a progression by steps and degrees before the mind can in this way arrive at certainty. Before demonstration there was a doubt which in intuitive knowlege cannot happen to the mind, that has its faculty of perception left to a degree capable of distinct ideas, no more than it can be a doubt to the eye, that can distinctly see white and black, whether this ink and paper be all of a color.

Now in every step that reason makes in demonstrative knowlege there is an intuitive knowlege of that agreement or disagreement it seeks with the next intermediate idea, which it uses as a proof; for if it were not so, that yet would need a proof; since, without the perception of such agreement or disagreement, there is no knowlege produced. By which it is evident that every step in reasoning that produces knowlege has intuitive certainty; which, when the mind perceives, there is no more required but to remember it, to make the agreement or disagreement of the

ideas concerning which we inquire visible and certain. This intuitive perception of the agreement or disagreement of the intermediate ideas in each step and progression of the demonstration must also be exactly carried in the mind : and a man must be sure that no part is left out ; which, because in long deductions the memory cannot easily retain, this knowledge becomes more imperfect than intuitive, and men often embrace falsehoods for demonstrations.

It has been generally taken for granted that mathematics alone are capable of demonstrative certainty. But to have such an agreement or disagreement as may be intuitively perceived, being as I imagine, not the privilege of the ideas of number, extension, and figure alone, it may possibly be the want of due method and application in us, and not of sufficient evidence in things, that demonstration has been thought to have so little to do in other parts of knowledge. For in whatever ideas the mind can perceive the agreement or disagreement immediately, there it is capable of intuitive knowledge : and where it can perceive the agreement or disagreement of any two ideas, by an intuitive perception of the agreement or disagreement they have with any intermediate ideas, there the mind is capable of demonstration, which is not limited to the ideas of figure, number, extension, or their modes. The reason why it has been generally supposed to belong to them only, is because, in comparing their equality or excess, the modes of numbers have every the least difference, very clear and perceivable ; and in extension, though every the least excess is not so perceptible, yet the mind has found out ways to discover the just equality of two angles, extensions, or figures ; and both, that is, numbers and figures, can be set down by visible and lasting marks.

But in other simple ideas, whose modes and differences are made and counted by degrees, and not quantity, we have not so nice and accurate a distinction of

their differences, as to perceive or find ways to measure their just equality, or the least differences. For those other simple ideas being appearances or sensations produced in us, by the size, figure, motion, &c. of minute corpuscles singly insensible, their different degrees also depend on the variation of some or all of those causes; which, since it cannot be observed by us in particles of matter, whereof each is too subtle to be perceived, it is impossible for us to have any exact measures of the different degrees of those simple ideas. Thus, for instance, not knowing what number of particles, nor what motion of them is fit to produce any precise degree of whiteness, we cannot demonstrate the certain equality of any two degrees of whiteness, because we have no certain standard to measure them by, nor means to distinguish every the least difference; the only help we have being from our senses, which in this point fail us.

But where the difference is so great as to produce in the mind ideas clearly distinct, there ideas of colors, as we see in different kinds, blue and red, for instance, are as capable of demonstration, as ideas of number and extension. What is here said of colors, I think holds true in all secondary qualities. These two; then, intuition and demonstration, are the degrees of our knowledge. Whatever comes short of one of these is but faith or opinion, not knowledge, at least in all general truths.

There is indeed another perception of the mind employed about the particular existence of finite beings; without us, which, going beyond probability, but not reaching to either of the foregoing degrees of certainty, passes under the name of knowledge. Nothing can be more certain, than that the idea we receive from an external object is in our minds. This is intuitive knowledge; but whether we can thence certainly infer the existence of any thing without us, corresponding to that idea, is that whereof some men

think there may be a question made, because men may have such an idea in their minds, when no such thing exists, no such object affects their senses. But it is evident that we are invincibly conscious to ourselves of a different perception, when we look on the sun in the day, and think on it by night; when we actually taste wormwood, and smell a rose, or only think on that savour or odour. So that I think we may add to the two former sorts of knowlege this also of the existence of particular external objects, by that perception and consciousness we have of the actual entrance of ideas from them, and allow these three degrees of knowlege, viz. intuitive, demonstrative, and sensitive.

But since our knowlege is founded on, and employed about our ideas only; will it follow thence that it must be conformable to our ideas, and that where our ideas are clear and distinct, obscure and confused, there our knowlege will be so too? I answer, No. For our knowlege consisting in the perception of the agreement or disagreement of any two ideas, its clearness or obscurity consists in the clearness or obscurity of that perception, and not in the clearness or obscurity of the ideas themselves. A man, for instance, that has a clear idea of the angles of a triangle and of equality to two right ones, may yet have but an obscure perception of their agreement; and so have but a very obscure knowlege of it. But obscure and confused ideas can never produce any clear or distinct knowlege, because as far as any ideas are obscure or confused, so far the mind can never perceive clearly whether they agree or disagree; or, to express the same thing in a way less apt to be misunderstood, he that hath not determined ideas to the words he uses cannot make propositions of them, of whose truth he can be certain.

CHAPTER III.

Of the Extent of Human Knowledge.

1. From what has been said concerning knowledge, it follows, first, that we can have no knowledge farther than we have ideas.

2. Secondly, that we have no knowledge farther than we can have perception of that agreement or disagreement of our ideas, either by intuition, demonstration, or sensation.

3. Thirdly, we cannot have an intuitive knowledge that shall extend itself to all our ideas, and all that we would know about them; because we cannot examine and perceive all the relations they have one to another, by juxtaposition, or an immediate comparison one with another. Thus we cannot intuitively perceive the equality of two extensions, the difference of whose figures makes their parts incapable of an exact immediate application.

4. Fourthly, our rational knowledge cannot reach to the whole extent of our ideas; because between two different ideas we would examine, we cannot always find such proofs as we can connect one to another, with an intuitive knowledge in all the parts of the deduction.

5. Fifthly, sensitive knowledge reaching no farther than the existence of things actually present to our senses, is yet much narrower than either of the former.

6. From all which it is evident, that the extent of our knowledge comes not only short of the reality of things, but even of the extent of our own ideas. We have the ideas of a square, a circle, and equality, and yet perhaps shall never be able to find a circle equal to a square.

7. 'We have the ideas of matter and thinking,¹ but

¹ Against that assertion of Mr. Locke, that 'possibly we shall never be able to know, whether any mere material being think or no,' &c. the bishop of Worcester argues thus: 'If this be

possibly shall never be able to know whether any mere material being thinks or no ; it being impossible for us, by the contemplation of our own ideas, without

true, then, for all that we can know by our ideas of matter and thinking, matter may have a power of thinking : and, if this hold, then it is impossible to prove a spiritual substance in us from the idea of thinking : for how can we be assured by our ideas, that God hath not given such a power of thinking to matter so disposed as our bodies are ? especially since it is said, That, in respect of our notions, it is not much more remote from our comprehension to conceive that God can, if he pleases, superadd to our idea of matter a faculty of thinking, than that he should superadd to it another substance, with a faculty of thinking. Whoever asserts this, can never prove a spiritual substance in us from a faculty of thinking, because he cannot know, from the idea of matter and thinking, that matter so disposed cannot think : and he cannot be certain that God hath not framed the matter of our bodies so as to be capable of it.

To which Mr. Locke answers thus : ' Here your lordship argues, that on my principles it cannot be proved that there is a spiritual substance in us. To which, give me leave, with submission, to say, that I think it may be proved from my principles, and I think I have done it ; and the proof in my book stands thus : First, we experiment in ourselves thinking. The idea of this action, or mode of thinking, is inconsistent with the idea of self-subsistence, and, therefore, has a necessary connexion with a support or subject of inhesion : the idea of that support is what we call substance ; and so from thinking experimented in us, we have a proof of a thinking substance in us, which in my sense is a spirit. Against this your lordship will argue, that, by what I have said of the possibility that God may, if he pleases, superadd to matter a faculty of thinking, it can never be proved that there is a spiritual substance in us, because, on that supposition, it is possible it may be a material substance that thinks in us. I grant it ; but add, that the general idea of substance being the same every where, the modification of thinking, or the power of thinking joined to it, makes it a spirit, without considering what other modifications it has, as whether it has the modification of solidity or no ; as, on the other side, substance, that has the modification of solidity, is matter, whether it has the modification of thinking, or no : and, therefore, if your lordship means by a spiritual, an immaterial substance, I grant I have not proved, nor on my principles can it be proved (your lordship meaning, as I think you do, demonstratively proved), that there is an immaterial substance in us that thinks. Though, I presume, from what I have said about this supposition of a system of matter, thinking (which there demonstrates that God is immaterial) will prove it in the highest degree probable that the thinking substance in us is immaterial : but your lordship thinks not probably enough ; and by charging

revelation, to discover, whether Omnipotency has not given to some systems of matter fitly disposed, a power to perceive and think, or else joined to matter so dis-

the want of demonstration on my principle; that the thinking thing in us is immaterial, your lordship seems to conclude it demonstrable from principles of philosophy. The demonstration I should with joy receive from your lordship, or any one; for though all the great ends of morality or religion are well enough secured without it, as I have shown, yet it would be a great advance of our knowledge in nature and philosophy.

'To what I have said in my book, to show that all the great ends of religion and morality are secured barely by the immortality of the soul, without a necessary supposition that the soul is immaterial, I crave leave to add, that immortality may, and shall be, annexed to that, which in its own nature is neither immaterial nor immortal, as the apostle expressly declares in these words: 'For this corruptible must put on incorruption, and this mortal must put on immortality.'

'Perhaps my using the word spirit for a thinking substance, without excluding materiality out of it, will be thought too great a liberty, and such as deserves censure, because I leave immateriality out of the idea I make it a sign of. I readily own, that words should be sparingly ventured on in a sense wholly new; and nothing but absolute necessity can excuse the boldness of using any term in a sense whereof we can produce no example. But, in the present case, I think I have great authorities to justify me. The soul is agreed, on all hands, to be that in us which thinks. And he that will look into the book of Cicero's Tusculan Questions, and into the sixth book of Virgil's *Æneid*, will find that these two great men, who, of all the Romans, best understood philosophy, thought, or at least did not deny, the soul to be a subtle matter, which might come under the name of *aura*, or *ignis*, or *æther*; and this soul, they both of them called *spiritus*: in the notion of which, it is plain, they included only thought and active motion, without the total exclusion of matter. Whether they thought right in this, I do not say; that is not the question; but whether they spoke properly, when they called an active, thinking, subtle substance, out of which they excluded only gross and palpable matter, *spiritus*, spirit. I think that nobody will deny, that if any among the Romans can be allowed to speak properly, Tully and Virgil are the two who may most securely be depended on for it: and one of them, speaking of the soul, says, *Idem spiritus hos reget artus*; and the other, *Vita continetur corpore et spiritu*; where it is plain by *corpus*, he means (as generally every where) only gross matter that may be felt and handled, as appears by these words: *Si cor, aut sanguis, aut cerebrum est animus; certe, quoniam est corpus, interibit cum reliquo corpore; si anima est, forte dissipabitur; si ignis, extinguetur*, Tusc. Quæst. l. i. c. 11. Here Cicero opposes *corpus* to *ignis* and *anima*; i. e. *aura*, or

posed, a thinking immaterial substance : it being not much more remote from our comprehension to conceive, that God can, if he pleases, superadd to matter

breath. And the foundation of that his distinction of the soul, from that which he calls *corpus*, or body, he gives a little lower in these words : *Tanta ejus tenuitas ut fugiat aciem*, *ibid.* c. 22. Nor was it the heathen world alone that had this notion of spirit ; the most enlightened of all the ancient people of God, Solomon himself, speaks after the same manner : ' That which befallerth the sons of men, befallerth beasts ; even one thing befallerth them ; as the one dieth, so dieth the other ; yea, they have all one spirit.' So I translate the Hebrew word *רוח*, here, for so I find it translated the very next verse but one : ' Who knoweth the spirit of man that goeth upward, and the spirit of the beast that goeth downwards to the earth ?' In which places, it is plain, that Solomon applies the word *רוח*, and our translators of him the word spirit, to a substance, out of which materiality was not wholly excluded, unless the spirit of a beast that goeth downwards to the earth be immaterial. Nor did the way of speaking in our Saviour's time vary from this. St. Luke tells us, that when our Saviour, after his resurrection, stood in the midst of them, they were affrighted, and supposed that they had seen *πνεῦμα*, the Greek word which always answers spirit in English : and so the translators of the Bible render it here : they supposed that they had seen a spirit. But our Saviour says to them, ' Behold my hands and my feet, that it is I myself ; handle me, and see ; for a spirit hath not flesh and bones, as you see me have.' Which words of our Saviour put the same distinction between body and spirit that Cicero did in the place above cited, viz. That the one was a gross compages that could be felt and handled ; and the other such as Virgil describes the ghost or soul of Anchises.

Ter conatus ibi collo dare brachia circum,
Ter frustra comprehensa manus effugit imago,
Par levibus ventis volucrique similima somno.

' I would not be thought hereby to say that spirit never does signify a purely immaterial substance. In that sense the Scripture, I take it, speaks, when it says God is a spirit ; and in that sense I have used it ; and in that sense I have proved from my principles that there is a spiritual substance, and am certain that there is a spiritual immaterial substance : which is, I humbly conceive, a direct answer to your lordship's question in the beginning of this argument, viz. How we come to be certain that there are spiritual substances, supposing this principle to be true, that the simple ideas by sensation and reflection are the sole matter and foundation of all our reasoning ? But this hinders not, but that if God, that infinite, omnipotent, and perfectly immaterial

a faculty of thinking, than that he should superadd to it another substance, with a faculty of thinking; since

Spirit, should please to give a system of very subtile matter, sense and motion, it might with propriety of speech be called spirit, though materiality were not excluded out of its complex idea. Your lordship proceeds: It is said, indeed, elsewhere, that it is repugnant to the idea of senseless matter, that it should put into itself sense, perception, and knowlege. But this does not reach the present case: which is not what matter can do of itself, but what matter prepared by an omnipotent hand can do. And what certainty can we have that he hath not done it? We can have none from the ideas, for those are given up in this case, and consequently we can have no certainty, on these principles, whether we have any spiritual substance within us or not.

'Your lordship in this paragraph proves, that, from what I say, we can have no certainty whether we have any spiritual substance in us or not. If by spiritual substance, your lordship means an immaterial substance in us, as you speak, I grant what your lordship says is true, that it cannot on these principles be demonstrated. But I must crave leave to say at the same time, that on these principles it can be proved to the highest degree of probability. If by spiritual substance, your lordship means a thinking substance, I must dissent from your lordship, and say; that we can have a certainty, on my principles, that there is a spiritual substance in us. In short, my lord, on my principles, i. e. from the idea of thinking, we can have a certainty that there is a thinking substance in us; from hence we have a certainty that there is an eternal thinking substance. This thinking substance, which has been from eternity, I have proved to be immaterial. This eternal, immaterial, thinking substance, has put into us a thinking substance, which, whether it be a material or immaterial substance, cannot be infallibly demonstrated from our ideas: though from them it may be proved, that it is to the highest degree probable that it is immaterial.'

Again, the bishop of Worcester undertakes to prove from Mr. Locke's principles, that we may be certain 'That the first eternal thinking Being, or omnipotent Spirit, cannot, if he would, give to certain systems of created sensible matter, put together as he sees fit, some degrees of sense, perception, and thought.'

To which Mr. Locke has made the following answer in his third letter.

'Your first argument I take to be this; that according to me, the knowlege we have being by our ideas, and our idea of matter in general being a solid substance, and our idea of body a solid extended figured substance; if I admit matter be capable of thinking, I confound the idea of matter with the idea of a spirit; to which I answer, No; no more than I confound the idea of matter with the idea of a horse, when I say that matter in general is a solid extended substance; and that a horse is a material animal,

we know not wherein thinking consists, nor to what sort of substances the Almighty has been pleased to

or an extended solid substance, with sense and spontaneous motion.

The idea of matter is an extended solid substance; wherever there is such a substance, there is matter; and the essence of matter, whatever other qualities, not contained in that essence, it shall please God to superadd to it. For example: God creates an extended solid substance, without the superadding any thing else to it, and so we may consider it at rest: to some parts of it he superadds motion, but it has still the essence of matter; other parts of it he frames into plants, with all the excellences of vegetation, life, and beauty, which is to be found in a rose or peach tree, &c. above the essence of matter in general, but it is still but matter: to other parts he adds sense and spontaneous motion, and those other properties that are to be found in an elephant. Hitherto it is not doubted but the power of God may go, and that the properties of a rose, a peach, or an elephant, superadded to matter, change not the properties of matter; but matter is in these things matter still. But if one venture to go one step farther, and say, God may give to matter thought, reason, and volition, as well as sense and spontaneous motions, there are men ready presently to limit the power of the omnipotent Creator, and tell us he cannot do it; because it destroys the essence, or changes the essential properties of matter. To make good which assertion, they have no more to say, but that thought and reason are not included in the essence of matter. I grant it; but whatever excellency, not contained in its essence, be superadded to matter, it does not destroy the essence of matter, if it leaves it an extended solid substance: wherever that is, there is the essence of matter: and if every thing of greater perfection, superadded to such a substance, destroys the essence of matter, what will become of the essence of matter in a plant or an animal, whose properties far exceed those of a mere extended solid substance?

But it is farther urged, that we cannot conceive how matter can think. I grant it: but to argue from thence, that God, therefore, cannot give to matter a faculty of thinking, is to say, God's omnipotency is limited to a narrow compass, because man's understanding is so, and brings down God's infinite power to the size of our capacities. If God can give no power to any parts of matter, but what men can account for from the essence of matter in general; if all such qualities and properties must destroy the essence, or change the essential properties, of matter, which are to our conceptions above it, and we cannot conceive to be the natural consequence of that essence; it is plain, that the essence of matter is destroyed, and its essential properties changed, in most of the sensible parts of this our system: for it is visible, that all the planets have revolutions about certain remote centres, which I would have any one explain, or make conceivable by the pure

give that power, which cannot be in any created being, but merely by the good pleasure and bounty of the Creator.

essence, or natural powers depending on the essence of matter in general, without something added to that essence, which we cannot conceive; for the moving of matter in a crooked line, or the attraction of matter by matter, is all that can be said in the case; either of which it is above our reach to derive from the essence of matter or body in general; though one of these two must unavoidably be allowed to be superadded in this instance to the essence of matter in general. The omnipotent Creator advised not with us in the making of the world, and his ways are not the less excellent, because they are past finding out.

In the next place, the vegetable part of the creation is not doubted to be wholly material; and yet he that will look into it will observe excellences and operations in this part of matter, which he will not find contained in the essence of matter in general, nor be able to conceive how they can be produced by it. And will he therefore say, that the essence of matter is destroyed in them, because they have properties and operations not contained in the essential properties of matter as matter, nor explicable by the essence of matter in general?

Let us advance one step farther, and we shall in the animal world meet with yet greater perfections and properties, no ways explicable by the essence of matter in general. If the omnipotent Creator had not superadded to the earth, which produced the irrational animals, qualities far surpassing those of the dull dead earth, out of which they were made, life, sense, and spontaneous motion, nobler qualities than were before in it, it had still remained rude senseless matter; and if to the individuals of each species he had not superadded a power of propagation, the species had perished with those individuals; but by these essences or properties of each species, superadded to the matter which they were made of, the essence or properties of matter in general were not destroyed or changed any more than any thing that was in the individuals before, was destroyed or changed by the power of generation; superadded to them by the first benediction of the Almighty.

In all such cases, the superinducement of greater perfections and nobler qualities destroys nothing of the essence or perfections that were there before; unless there can be shown a manifest repugnancy between them: but all the proof offered for that, is only, that we cannot conceive how matter, without such superadded perfections, can produce such effects; which is, in truth, no more than to say, matter in general, or every part of matter, as matter, has them not; but is no reason to prove, that God, if he pleases, cannot superadd them to some parts of matter, unless it can be proved to be a contradiction, that God should give to some parts of matter qualities and perfections, which matter in general has not; though we cannot conceive how matter is invested with them, or how it operates by virtue of those new endowments:

8. I say not this, that I may any way lessen the belief of the soul's immateriality: I am not here speaking of probability, but knowlege; and I think that it

nor is it to be wondered that we cannot, whilst we limit all its operations to those qualities it had before, and would explain them by the known properties of matter in general, without any such induced perfections. For, if this be a right rule of reasoning, to deny a thing to be, because we cannot conceive the manner how it comes to be; I shall desire them who use it, to stick to this rule, and see what work it will make both in divinity as well as philosophy; and whether they can advance any thing more in favor of scepticism.

For to keep within the present subject of the power of thinking and self-motion, bestowed by omnipotent Power in some parts of matter: the objection to this is, I cannot conceive how matter should think. What is the consequence? *ergo*, God cannot give it a power to think. Let this stand for a good reason, and then proceed in other cases by the same. You cannot conceive how matter can attract matter at any distance, much less at the distance of 1,000,000 of miles; *ergo*, God cannot give it such a power: you cannot conceive how matter should feel, or move itself, or affect an immaterial being, or be moved by it; *ergo*, God cannot give it such powers: which is, in effect, to deny gravity, and the revolution of the planets about the sun; to make brutes mere machines, without sense or spontaneous motion; and to allow man neither sense nor voluntary motion.

Let us apply this rule one degree farther. You cannot conceive how an extended solid substance should think; therefore, God cannot make it think: can you conceive how your own soul, or any substance, thinks? You find indeed that you do think, and so do I; but I want to be told how the action of thinking is performed: this, I confess, is beyond my conception; and I would be glad any one, who conceives it, would explain it to me. God, I find, has given me this faculty; and since I cannot but be convinced of his power in this instance, which though I every moment experiment in myself, yet I cannot conceive the manner of; what would it be less than an insolent absurdity, to deny his power in other like cases, only for this reason, because I cannot conceive the manner how?

To explain this matter a little farther: God has created a substance; let it be, for example, a solid extended substance. Is God bound to give it, besides being, a power of action? that, I think, nobody will say: he, therefore, may leave it in a state of inactivity, and it will be nevertheless a substance; for action is not necessary to the being of any substance that God does create. God has likewise created and made to exist, *de novo*, an immaterial substance, which will not lose its being of a substance, though God should bestow on it nothing more but this bare being, without giving it any activity at all. Here are now two distinct sub-

is of use to us, to discern how far our knowledge does reach ; for the state that we are at present in, not being that of vision, we must, in many things, content

stances, the one material, the other immaterial, both in a state of perfect inactivity. Now I ask, what power God can give to one of these substances (supposing them to retain the same distinct natures that they had as substances in their state of inactivity), which he cannot give to the other? In that state, it is plain, neither of them thinks ; for thinking being an action, it cannot be denied that God can put an end to an action of any created substance, without annihilating of the substance whereof it is an action ; and if it be so, he can also create or give existence to such a substance, without giving that substance any action at all. By the same reason it is plain, that neither of them can move itself. Now I would ask, why Omnipotency cannot give to either of these substances, which are equally in a state of perfect inactivity, the same power that it can give to the other? Let it be, for example, that of spontaneous or self motion, which is a power that it is supposed God can give to an unsolid substance, but denied that he can give to solid substance.

‘ If it be asked, why they limit the omnipotency of God in reference to the one rather than the other of these substances? all that can be said to it is, that they cannot conceive how the solid substance should ever be able to move itself. And as little, say I, are they able to conceive how a created unsolid substance should move itself. But there may be something in an immaterial substance that you do not know. I grant it; and in a material one too: for example, gravitation of matter towards matter, and in the several proportions observable, inevitably shows that there is something in matter that we do not understand, unless we can conceive self-motion in matter; or an inexplicable and inconceivable attraction in matter, at immense, almost incomprehensible distances: it must, therefore, be confessed, that there is something in solid, as well as unsolid, substances, that we do not understand. But this we know, that they may each of them have their distinct beings, without any activity superadded to them, unless you will deny that God can take from any being its power of acting, which it is probable will be thought too presumptuous for any one to do: and, I say, it is as hard to conceive self-motion in a created immaterial, as in a material being, consider it how you will: and, therefore, this is no reason to deny Omnipotency to be able to give a power of self-motion to a material substance, if he pleases, as well as to an immaterial; since neither of them can have it from themselves, nor can we conceive how it can be in either of them.

‘ The same is visible in the other operation of thinking: both these substances may be made and exist without thought; neither of them has, or can have, the power of thinking from itself: God may give it to either of them, according to the good pleasure of

ourselves with faith and probability: and in the present question about the immateriality of the soul, if our faculties cannot arrive at demonstrative certainty,

his omnipotency; and in whichever of them it is, it is equally beyond our capacity to conceive, how either of these substances thinks. But for that reason, to deny that God, who had power enough to give them both a being out of nothing, can, by the same omnipotency, give them what other powers and perfections he pleases, has no better foundation than to deny his power of creation, because we cannot conceive how it is performed; and there, at last, this way of reasoning must terminate.

That Omnipotency cannot make a substance to be solid and not solid at the same time, I think with due reverence we may say; but that a solid substance may not have qualities, perfections, and powers, which have no natural or visibly necessary connexion with solidity and extension, is too much for us (who are but of yesterday, and know nothing) to be positive in. If God cannot join things together by connexions inconceivable to us, we must deny even the consistency and being of matter itself; since every particle of it having some bulk, has its parts connected by ways inconceivable to us. So that all the difficulties that are raised against the thinking of matter, from our ignorance, or narrow conceptions, stand not at all in the way of the power of God, if he pleases to ordain it so; nor prove any thing against his having actually endued some parcels of matter, so disposed as he thinks fit, with a faculty of thinking, till it can be shown that it contains a contradiction to suppose it.

Though to me sensation be comprehended under thinking in general, yet, in the foregoing discourse, I have spoken of sense in brutes, as distinct from thinking; because your lordship, as I remember, speaks of sense in brutes. But here I take liberty to observe, that if your lordship allows brutes to have sensation, it will follow, either that God can and doth give to some parcels of matter a power of perception and thinking; or that all animals have immaterial, and consequently, according to your lordship, immortal souls, as well as men; and to say that fleas and mites, &c. have immortal souls as well as men, will possibly be looked on as going a great way to serve an hypothesis.

I have been pretty large in making this matter plain, that they who are so forward to bestow hard censures or names on the opinions of those who differ from them, may consider whether sometimes they are not more due to their own; and that they may be persuaded a little to temper that heat, which, supposing the truth in their current opinions, gives them (as they think) a right to lay what imputations they please on those who would fully examine the grounds they stand on. For talking with a supposition and insinuations, that truth and knowledge, nay, and religion too, stand and fall with their systems, is at best but an imperious way of begging the question, and assuming to themselves, under

we need not think it strange. All the great ends of morality and religion are well enough secured, without philosophical proofs of the soul's immateriality,

the pretence of zeal for the cause of God, a title to infallibility. It is very becoming that men's zeal for truth should go as far as their proofs, but not go for proofs themselves. He that attacks received opinions with any thing but fair arguments, may, I own, be justly suspected not to mean well, nor to be led by the love of truth; but the same may be said of him too who so defends them. An error is not the better for being common, nor truth the worse for having lain neglected; and if it were put to the vote any where in the world, I doubt, as things are managed, whether truth would have the majority, at least whilst the authority of men, and not the examination of things, must be its measure. The imputation of scepticism, and those broad insinuations to render what I have writ suspected, so frequent, as if that were the great business of all this pains you have been at about me, has made me say thus much, my lord, rather as my sense of the way to establish truth in its full force and beauty, than that I think the world will need to have any thing said to it, to make it distinguish between your lordship's and my design in writing, which, therefore, I securely leave to the judgment of the reader, and return to the argument in hand.

What I have above said, I take to be a full answer to all that your lordship would infer from my idea of matter, of liberty, of identity, and from the power of abstracting. You ask, How can my idea of liberty agree with the idea that bodies can operate only by motion and impulse? Ans. By the omnipotency of God, who can make all things agree, that involve not a contradiction. It is true, I say, That bodies operate by impulse, and nothing else. And so I thought when I writ it, and can yet conceive no other way of their operation. But I am since convinced by the judicious Mr. Newton's incomparable book, that it is too bold a presumption to limit God's power in this point by my narrow conceptions. The gravitation of matter towards matter, by ways unconceivable to me, is not only a demonstration that God can, if he pleases, put into bodies powers, and ways of operation, above what can be derived from our idea of body, or can be explained by what we know of matter; but also an unquestionable, and every where visible, instance that he has done so. And, therefore, in the next edition of my book I will take care to have that passage rectified.

As to self-consciousness, your lordship asks, What is there like self-consciousness in matter? Nothing at all in matter, as matter. But that God cannot bestow on some parcels of matter a power of thinking, and with it self-consciousness, will never be proved by asking, how is it possible to apprehend that mere body should perceive that it doth perceive? The weakness of our apprehension, I grant in the case: I confess as much as you

since it is evident, that he who made us sensible intelligent beings, can, and will restore us to the like state of sensibility in another world, and make us capable

please, that we cannot conceive how a solid, no—nor how an un-solid, created substance thinks; but this weakness of our apprehension reaches not the power of God, whose weakness is stronger than any thing in men.

Your argument from abstraction, we have in this question, If it may be in the power of matter to think, how comes it to be so impossible for such organised bodies as the brutes have, to enlarge their ideas by abstraction? Ans. This seems to suppose, that I place thinking within the natural power of matter. If that be your meaning, my lord, I never say nor suppose that all matter has naturally in it a faculty of thinking, but the direct contrary. But if you mean that certain parcels of matter, ordered by the Divine Power, as seems fit to him, may be made capable of receiving from his omnipotency the faculty of thinking; that, indeed, I say; and that being granted, the answer to your question is easy; since, if omnipotency can give thought to any solid substance, it is not hard to conceive that God may give that faculty in a higher or lower degree, as it pleases him, who knows what disposition of the subject is suited to such a particular way or degree of thinking.

Another argument to prove that God cannot endue any parcel of matter with the faculty of thinking, is taken from those words of mine, where I show by what connexion of ideas we may come to know that God is an immaterial substance. They are these: The idea of an eternal actual knowing being, with the idea of immateriality, by the intervention of the idea of matter, and of its actual division, divisibility, and want of perception, &c. From whence your lordship thus argues: Here the want of perception is owned to be so essential to matter, that God is therefore concluded to be immaterial. Ans. Perception and knowledge in that one eternal Being, where it has its source, it is visible must be essentially inseparable from it: therefore the actual want of perception in so great a part of the particular parcels of matter is a demonstration, that the first Being, from whom perception and knowledge are inseparable, is not matter: how far this makes the want of perfection an essential property of matter, I will not dispute; it suffices that it shows that perception is not an essential property of matter; and therefore matter cannot be that eternal original Being to which perception and knowledge are essential. Matter, I say, naturally is without perception: *ergo*, says your lordship, want of perception is an essential property of matter, and God does not change the essential properties of things, their nature remaining. From whence you infer, that God cannot bestow on any parcel of matter (the nature of matter remaining) a faculty of thinking. If the rules of logic, since my days, be not changed, I may safely deny this consequence. For an argument that runs thus, God does not;

there to receive the retribution he has designed to men, according to their doings in this life. And therefore it is not of such mighty necessity to determine one way

ergo, he cannot, I was taught, when I first came to the university, would not hold. For I never said God did; but, That I see no contradiction in it, that he should, if he pleased, give to some systems of senseless matter a faculty of thinking; and I know nobody before Descartes, that ever pretended to show that there was any contradiction in it. So that at worst, my not being able to see in matter any such incapacity as makes it impossible for Omnipotency to bestow on it a faculty of thinking, makes me opposite only to the Cartesians. For as far as I have seen or heard, the fathers of the Christian church never pretended to demonstrate that matter was incapable to receive a power of sensation, perception, and thinking, from the hand of the omnipotent Creator. Let us therefore, if you please, suppose the form of your argumentation right, and that your lordship means, God cannot: and then, if your argument be good, it proves, That God could not give to Balaam's ass a power to speak to his master, as he did, for the want of rational discourse being natural to that species; it is but for your lordship to call it an essential property, and then God cannot change the essential properties of things, their nature remaining: whereby it is proved, That God cannot, with all his omnipotency, give to an ass a power to speak, as Balaam's did.

' You say, my lord, You do not set bounds to God's omnipotency: for he may, if he please, change a body into an immaterial substance, i. e. take away from a substance the solidity which it had before, and which made it matter, and then give it a faculty of thinking, which it had not before, and which makes it a spirit, the same substance remaining. For if the same substance remains not, the body is not changed into an immaterial substance. But the solid substance, and all belonging to it, is annihilated, and an immaterial substance created, which is not a change of one thing into another, but the destroying of one, and making another *de novo*. In this change, therefore, of a body or material substance into an immaterial, let us observe these distinct considerations.

' First, you say, God may, if he please, take away from a solid substance, solidity, which is that which makes it a material substance or body; and may make it an immaterial substance, i. e. a substance without solidity. But this privation of one quality gives it not another: the bare taking away a lower or less noble quality does not give it a higher or nobler: that must be the gift of God. For the bare privation of one, and a meaner quality, cannot be the position of a higher and better: unless any one will say, that cogitation, or the power of thinking, results from the nature of substance itself; which if it do, then wherever there is substance there must be cogitation, or a power of thinking. Here, then, on your lordship's own principles, is an immaterial substance without the faculty of thinking.

or the other, as some over-zealous for, or against the immateriality of the soul, have been forward to make the world believe.

'In the next place, you will not deny, but God may give to this substance, thus deprived of solidity, a faculty of thinking; for you suppose it made capable of that by being made immaterial; whereby you allow, that the same numerical substance may be sometimes wholly incogitative, or without a power of thinking, and at other times perfectly cogitative, or endued with a power of thinking.

'Further, you will not deny, but God can give it solidity, and make it material again. For I conclude it will not be denied that God can make it again what it was before. Now I crave leave to ask your lordship, why God having given to this substance the faculty of thinking, after solidity was taken from it, cannot restore to it solidity again, without taking away the faculty of thinking? When you have resolved this, my lord, you will have proved it impossible for God's omnipotence to give a solid substance a faculty of thinking; but till then, not having proved it impossible, and yet denying that God can do it, is to deny that he can do what is in itself possible; which, as I humbly conceive, is visibly to set bounds to God's omnipotency, though you say here, You do not set bounds to God's omnipotency.

'If I should imitate your lordship's way of writing, I should not omit to bring in Epicurus here, and take notice, that this was his way, *Deum verbis ponere, re tollere*; and then add, that I am certain you do not think he promoted the great ends of religion and morality. For it is with such candid and kind insinuations as these, that you bring in both Hobbes and Spinoza into your discourse here about God's being able, if he please, to give to some parcels of matter, ordered as he thinks fit, a faculty of thinking; neither of those authors having, as appears by any passage you bring out of them, said any thing to this question; nor having, as it seems, any other business here but by their names, skilfully to give that character to my book, with which you would recommend it to the world.

'I pretend not to inquire what measure of zeal, nor for what, guides your lordship's pen in such a way of writing as yours has all along been with me: only I cannot but consider, what reputation it would give to the writings of the fathers of the church if they should think truth required, or religion allowed them to imitate such patterns. But God be thanked, there be those amongst them who do not admire such ways of managing the cause of truth or religion; they being sensible that if every one, who believes, or can pretend he hath truth on his side, is thereby authorised, without proof, to insinuate whatever may serve to prejudice men's minds against the other side, there will be a great ravage made on charity and practice, without any gain to truth and knowlege; and that the liberties frequently taken by

9. The affirmations or negations we make concerning the ideas we have, being reduced to the four sorts above mentioned, viz. identity, coexistence, relation,

disputants to do so, may have been the cause that the world in all ages has received so much harm, and so little advantage, from controversies in religion.

‘ These are the arguments which your lordship has brought to confute one saying in my book, by other passages in it; which therefore being all but *argumenta ad hominem*, if they did prove what they do not, are of no other use than to gain a victory over me: a thing, methinks, so much beneath your lordship, that it does not deserve one of your pages. The question is, whether God can, if he pleases, bestow on any parcel of matter, ordered as he thinks fit, a faculty of perception and thinking. You say, You look on a mistake herein to be of dangerous consequence as to the great ends of religion and morality. If this be so, my lord, I think one may well wonder, why your lordship has brought no arguments to establish the truth itself, which you look on to be of such dangerous consequence to be mistaken in; but have spent so many pages only in a personal matter, in endeavoring to show that I had inconsistencies in my book; which, if any such thing had been shown, the question would be still as far from being decided, and the danger of mistaking about it as little prevented, as if nothing of all this had been said. If, therefore, your lordship’s care of the great ends of religion and morality have made you think it necessary to clear this question, the world has reason to conclude there is little to be said against that proposition which is to be found in my book, concerning the possibility, that some parcels of matter might be so ordered by Omnipotence, as to be endued with a faculty of thinking, if God so pleased; since your lordship’s concern for the promoting the great ends of religion and morality has not enabled you to produce one argument against a proposition that you think of so dangerous consequence to them.

‘ And here I crave leave to observe, that though in your title page you promise to prove that my notion of ideas is inconsistent with itself (which if it were, it could hardly be proved to be inconsistent with any thing else), and with the articles of the Christian faith; yet your attempts all along have been to prove me, in some passages of my book, inconsistent with myself, without having shown any proposition in my book inconsistent with any article of the Christian faith.

‘ I think your lordship has indeed made use of one argument of your own: but it is such an one, that I confess I do not see how it is apt much to promote religion, especially the Christian religion, founded on revelation. I shall set down your lordship’s words, that they may be considered: you say, That you are of opinion that the great ends of religion and morality are best secured by the proofs of the immortality of the soul, from its nature and

and real existence ; I shall examine how far our knowledge extends in each of these.

First, as to identity and diversity, our intuitive

properties ; and which you think prove it immaterial. Your lordship does not question whether God can give immortality to a material substance ; but you say it takes off very much from the evidence of immortality, if it depend wholly on God's giving that, which of its own nature it is not capable of, &c. So likewise you say, If a man cannot be certain but that matter may think (as I affirm), then what becomes of the soul's immateriality (and consequently immortality) from its operations ? But for all this, say I, his assurance of faith remains on its own basis. Now you appeal to any man of sense, whether the finding the uncertainty of his own principles, which he went on, in point of reason, doth not weaken the credibility of these fundamental articles, when they are considered purely as matters of faith ? For before, there was a natural credibility in them on account of reason ; but by going on wrong grounds of certainty, all that is lost ; and instead of being certain, he is more doubtful than ever. And if the evidence of faith falls so much short of that of reason, it must needs have less effect on men's minds, when the subserviency of reason is taken away ; as it must be when the grounds of certainty by reason are vanished. Is it at all probable, that he who finds his reason deceive him in such fundamental points, shall have his faith stand firm and unmoveable on the account of revelation ? For in matters of revelation there must be some antecedent principles supposed before we can believe any thing on the account of it.

More to the same purpose we have some pages farther, where, from some of my words, your lordship says, You cannot but observe, that we have no certainty on my grounds, that self-consciousness depends on an individual immaterial substance, and consequently that a material substance may, according to my principles, have self-consciousness in it ; at least, that I am not certain of the contrary. Whereon your lordship bids me consider, whether this does not a little affect the whole article of the resurrection ? What does all this tend to, but to make the world believe that I have lessened the credibility of the immortality of the soul, and the resurrection, by saying, that though it be most highly probable that the soul is immaterial, yet on my principles it cannot be demonstrated ; because it is not impossible to God's omnipotency, if he pleases, to bestow on some parcels of matter, disposed as he sees fit, a faculty of thinking ?

This, your accusation of my lessening the credibility of these articles of faith, is founded on this, that the article of the immortality of the soul abates of its credibility, if it be allowed that its immateriality (which is the supposed proof from reason and philosophy of its immortality) cannot be demonstrated from natural reason : which argument of your lordship's bottoms, as I humbly conceive, on this, that divine revelation abates of its credibility

knowledge is as far extended as our ideas themselves; and there can be no idea in the mind, which it does

in all those articles it proposes, proportionably as human reason fails to support the testimony of God. And all that your lordship in these passages has said, when examined, will, I suppose, be found to import thus much, viz. does God propose any thing to mankind to be believed? It is very fit and credible to be believed, if reason can demonstrate it to be true. But if human reason comes short in the case, and cannot make it out, its credibility is thereby lessened; which is in effect to say, that the veracity of God is not a firm and sure foundation of faith to rely on, without the concurrent testimony of reason, i. e. with reverence be it spoken, God is not to be believed on his own word, unless what he reveals be in itself credible, and might be believed without him.

'If this be a way to promote religion, the Christian religion, in all its articles, I am not sorry that it is not a way to be found in any of my writings; for I imagine any thing like this would (and I should think deserve to) have other titles than bare scepticism bestowed on it, and would have raised no small outcry against any one, who is not to be supposed to be in the right in all that he says, and so may securely say what he pleases. Such as I, the *profanum vulgus*, who take too much on us, if we should examine, have nothing to do but to hearken and believe, though what he said should subvert the very foundations of the Christian faith.

'What I have above observed, is so visibly contained in your lordship's argument, that when I met with it in your answer to my first letter, it seemed so strange for a man of your lordship's character, and in a dispute in defence of the doctrine of the Trinity, that I could hardly persuade myself but it was a slip of your pen: but when I found it in your second letter made use of again, and seriously enlarged as an argument of weight to be insisted on, I was convinced that it was a principle that you heartily embraced, how little favorable soever it was to the articles of the Christian religion, and particularly those which you undertook to defend.

'I desire my reader to peruse the passages as they stand in your letters themselves, and see whether what you say in them does not amount to this, that a revelation from God is more or less credible, according as it has a stronger or weaker confirmation from human reason. For,

1. Your lordship says, You do not question whether God can give immortality to a material substance; but you say it takes off very much from the evidence of immortality, if it depends wholly on God's giving that which of its own nature it is not capable of.

To which I reply, any one's not being able to demonstrate the soul to be immaterial, takes off not very much, nor at all, from the evidence of its immortality, if God has revealed that it shall be immortal; because the veracity of God is a demonstration of the truth of what he has revealed, and the want of another demonstration of a proposition, that is demonstratively true, takes not off

not presently, by an intuitive knowlege, perceive to be what it is, and to be different from any other.

from the evidence of it. For where there is a clear demonstration, there is as much evidence as any truth can have, that is not self-evident. God has revealed that the souls of men should live for ever. But, says your lordship, from this evidence, it takes off very much, if it depends wholly on God's giving that, which of its own nature it is not capable of; i. e. the revelation and testimony of God loses much of its evidence, if this depends wholly on the good pleasure of God, and cannot be demonstratively made out by natural reason, that the soul is immaterial, and consequently in its own nature immortal. For that is all that here is or can be meant by these words, 'which of its own nature it is not capable of,' to make them to the purpose. For the whole of your lordship's discourse here, is to prove that the soul cannot be material; because then the evidence of its being immortal would be very much lessened. Which is to say, that it is not as credible on divine revelation, that a material substance should be immortal, as an immaterial; or, which is all one, that God is not equally to be believed, when he declares that a material substance shall be immortal, as when he declares that an immaterial shall be so, because the immortality of a material substance cannot be demonstrated from natural reason.

Let us try this rule of your lordship's a little farther: God hath revealed, that the bodies men shall have after the resurrection, as well as their souls, shall live to eternity? Does your lordship believe the eternal life of the one of these, more than of the other, because you think you can prove it of one of them by natural reason, and of the other not. Or can any one; who admits of divine revelation in the case, doubt of one of them more than the other? or think this proposition less credible, that the bodies of men, after the resurrection, shall live for ever; than this, that the souls of men shall, after the resurrection, live for ever? For that he must do, if he thinks either of them is less credible than the other. If this be so, reason is to be consulted, how far God is to be believed, and the credit of divine testimony must receive its force from the evidence of reason; which is evidently to take away the credibility of divine revelation, in all supernatural truths, wherein the evidence of reason fails. And how much such a principle as this tends to the support of the doctrine of the Trinity, or the promoting the Christian religion, I shall leave it to your lordship to consider.

I am not so well read in Hobbes or Spinoza, as to be able to say what were their opinions in this matter. But possibly there be those, who will think your lordship's authority of more use to them in the case than those justly decried names; and be glad to find your lordship a patron of the oracles of reason, so little to the advantage of the oracles of divine revelation. This at least, I think, may be subjoined to the words at the bottom of the next page, That those who have gone about to lessen the credibility of the

10. Secondly, as to the agreement or disagreement of our ideas in coexistence : in this our knowledge is very short, though in this consists the greatest and

articles of faith, which evidently they do, who say they are less credible, because they cannot be made out demonstratively by natural reason, have not been thought to secure several of the articles of the Christian faith, especially those of the Trinity, incarnation, and resurrection of the body, which are those on the account of which I am brought by your lordship into this dispute.

' I shall not trouble the reader with your lordship's endeavors, in the following words, to prove, That if the soul be not an immaterial substance it can be nothing but life ; your very first words visibly confuting all that you allege to that purpose. They are, If the soul be a material substance, it is really nothing but life ; which is to say, that if the soul be really a substance, it is not really a substance, but really nothing else but an affection of a substance ; for the life, whether of a material or immaterial substance, is not the substance itself, but an affection of it.

' 2. You say, Although we think the separate state of the soul after death is sufficiently revealed in the Scripture ; yet it creates a great difficulty in understanding it, if the soul be nothing but life, or a material substance, which must be dissolved when life is ended. For if the soul be a material substance, it must be made up, as others are, of the cohesion of solid and separate parts, how minute and invisible soever they be. And what is it which should keep them together when life is gone ? So that it is no easy matter to give an account, how the soul should be capable of immortality, unless it be an immaterial substance ; and then we know the solution and texture of bodies cannot reach the soul, being of a different nature.

' Let it be as hard a matter as it will to give an account what it is that should keep the parts of a material soul together, after it is separated from the body ; yet it will be always as easy to give an account of it, as to give an account what it is that shall keep together a material and immaterial substance. And yet the difficulty that there is to give an account of that, I hope does not, with your lordship, weaken the credibility of the inseparable union of soul and body to eternity : and I persuade myself, that the men of sense, to whom your lordship appeals in the case, do not find their belief of this fundamental point much weakened by that difficulty. I thought heretofore (and by your lordship's permission, would think so still), that the union of the parts of matter, one with another, is as much in the hands of God, as the union of a material and immaterial substance ; and that it does not take off very much, or at all, from the evidence of immortality, which depends on that union, that it is no easy matter to give an account what it is that should keep them together : though its depending wholly on the gift and good pleasure of God, where the manner creates great difficulty in the understanding, and our reason cannot discover in

most material part of our knowledge concerning substances: for our ideas of substances being, as I have shown, nothing but certain collections of simple ideas,

the nature of things how it is, be that which, your lordship so positively says, lessens the credibility of the fundamental articles of the resurrection and immortality.

‘But, my lord, to remove this objection a little, and to show of how small force it is even with yourself; give me leave to presume that your lordship as firmly believes the immortality of the body after the resurrection, as any other article of faith: if so, then it being no easy matter to give an account, what it is that shall keep together the parts of a material soul, to one that believes it is material, can no more weaken the credibility of its immortality, than the like difficulty weakens the credibility of the immortality of the body. For when your lordship shall find it an easy matter to give an account what it is, besides the good pleasure of God, which shall keep together the parts of our material bodies to eternity, or even soul and body; I doubt not but any one, who shall think the soul material, will also find it as easy to give an account what it is that shall keep those parts of matter also together to eternity.

‘Were it not that warmth of controversy is apt to make men so far forget, as to take up those principles themselves (when they will serve their turn) which they have highly condemned in others, I should wonder to find your lordship to argue, that because it is a difficulty to understand what shall keep together the minute parts of a material soul, when life is gone; and because it is not an easy matter to give an account how the soul shall be capable of immortality, unless it be an immaterial substance; therefore it is not so credible as if it were easy to give an account by natural reason, how it could be. For to this it is, that all this your discourse tends, as is evident by what is already set down; and will be more fully made out by what your lordship says in other places, though here needs no such proofs, since it would all be nothing against me in any other sense.

‘I thought your lordship had in other places asserted, and insisted on this truth, that no part of divine revelation was the less to be believed because the thing itself created great difficulty in the understanding, and the manner of it was hard to be explained; and it was no easy matter to give an account how it was. This, as I take it, your lordship condemned in others, as a very unreasonable principle, and such as would subvert all the articles of the Christian religion, that were mere matters of faith, as I think it will: and is it possible, that you should make use of it here yourself, against the article of life and immortality, that Christ hath brought to light through the Gospel, and neither was, nor could be, made out by natural reason without revelation? But you will say, you speak only of the soul; and your words are, That it is no easy matter to give an account how the soul should

coexisting in one subject (our idea of flame, for instance, is a body hot, luminous, and moving upward): when we would know any thing farther concerning

be capable of immortality, unless it be an immaterial substance. I grant it; but crave leave to say, that there is not any one of those difficulties that are, or can be, raised about the manner how a material soul can be immortal, which do not as well reach the immortality of the body.

But, if it were not so, I am sure this principle of your lordship's would reach other articles of faith, whereas our natural reason finds it not so easy to give an account how those mysteries are; and which therefore, according to your principles, must be less credible than other articles, that create less difficulties to the understanding. For your lordship says, That you appeal to any man of sense, whether to a man who thought by his principles, he could from natural grounds demonstrate the immortality of the soul, the finding the uncertainty of those principles he went on in point of reason, i. e. the finding he could not certainly prove it by natural reason, doth not weaken the credibility of that fundamental article, when it is considered purely as a matter of faith. Which in effect, I humbly conceive, amounts to this, that a proposition divinely revealed, that cannot be proved by natural reason, is less credible than one that can: which seems to me to come very little short of this, with due reverence be it spoken, that God is less to be believed when he affirms a proposition that cannot be proved by natural reason, than when he proposes what can be proved by it. The direct contrary to which is my opinion, though you endeavor to make it good by these following words: If the evidence of faith falls too much short of that of reason, it must needs have less effect on men's minds, when the suberviency of reason is taken away; as it must be when the grounds of certainty by reason are vanished. Is it at all probable, that he who finds his reason deceive him in such fundamental points, should have his faith stand firm and unmoveable on the account of revelation? Than which I think there are hardly plainer words to be found out to declare, that the credibility of God's testimony depends on the natural evidence or probability of the things we receive from revelation; and rises and falls with it: and that the truths of God, or the articles of mere faith, lose so much of their credibility, as they want proof from reason: which, if true, revelation may come to have no credibility at all. For if, in this present case, the credibility of this proposition, the souls of men shall live for ever, revealed in the Scripture, be lessened by confessing it cannot be demonstratively proved from reason; though it be asserted to be most highly probable; must not, by the same rule, its credibility dwindle away to nothing, if natural reason should not be able to make it out to be so much as probable; or should place the probability from natural principles on the other side? For if mere want of demonstration lessens the

this or any other sort of substance, what do we but inquire what other qualities or powers these substances have or have not? which is nothing else but to know

credibility of any proposition divinely revealed, must not want of probability, or contrary probability from natural reason, quite take away its credibility? Here at last it must end, if in any one case the veracity of God, and the credibility of the truths we receive from him by revelation, be subjected to the verdicts of human reason, and be allowed to receive any accession or diminution from other proofs, or want of other proofs of its certainty or probability.

'If this be your lordship's way to promote religion, or defend its articles, I know not what argument the greatest enemies of it could use more effectual for the subversion of those you have undertaken to defend; this being to resolve all revelation perfectly and purely into natural reason, to bound its credibility by that, and leave no room for faith in other things, than what can be accounted for by natural reason without revelation.

'Your lordship insists much on it, as if I had contradicted what I had said in my Essay, by saying, That on my principles it cannot be demonstratively proved that it is an immaterial substance in us that thinks, however probable it be. He that will be at the pains to read that chapter of mine, and consider it, will find, that my business there was to show, that it was no harder to conceive an immaterial than a material substance; and that from the ideas of thought, and a power of moving of matter, which we experienced in ourselves (ideas originally not belonging to matter as matter), there was no more difficulty to conclude there was an immaterial substance in us, than that we had material parts. These ideas of thinking, and power of moving of matter, I, in another place, showed, did demonstratively lead us to the certain knowledge of the existence of an immaterial thinking being, in whom we have the idea of spirit in the strictest sense; in which sense I also applied it to the soul, in that 23d chap. of my Essay; the easily conceivable possibility, nay, great probability, that the thinking substance in us is immaterial, giving me sufficient ground for it. In which sense I shall think I may safely attribute it to the thinking substance in us, till your lordship shall have better proved from my words that it is impossible it should be immaterial. For I only say, that it is possible, i. e. involves no contradiction, that God, the omnipotent immaterial Spirit, should, if he pleases, give to some parcels of matter, disposed as he thinks fit, a power of thinking and moving; which parcels of matter, so endued with a power of thinking and motion, might properly be called spirits, in contradistinction to unthinking matter; in all which, I presume, there is no manner of contradiction.

'I justified my use of the word spirit, in that sense, from the authorities of Cicero and Virgil, applying the Latin word *spiritus*, from whence spirit is derived to the soul as a thinking thing,

what other simple ideas do, or do not coexist with those that make up that complex idea. The reason of this is, because the simple ideas which make up our

without excluding materiality out of it. To which your lordship replies, That Cicero, in his Tusculan Questions, supposes the soul not to be a finer sort of body, but of a different nature from the body—that he calls the body the prison of the soul—and says, That a wise man's business is to draw off his soul from his body. And then your lordship concludes, as is usual, with a question, Is it possible now to think so great a man looked on the soul but as a modification of the body, which must be at an end with life? Answer, No; it is impossible that a man of so good sense as Tully, when he uses the word *corpus*, or body, for the gross and visible parts of a man, which he acknowledges to be mortal, should look on the soul to be a modification of that body, in a discourse wherein he was endeavoring to persuade another that it was immortal. It is to be acknowledged, that truly great men, such as he was, are not wont so manifestly to contradict themselves. He had therefore no thought concerning the modification of the body of a man in the case. He was not such a trifier as to examine, whether the modification of the body of a man was immortal, when that body itself was mortal. And therefore that which he reports as Dicæarchus's opinion, he dismisses in the first book, without any more ado, c. 11. But Cicero's was a direct, plain, and sensible inquiry, viz. What the soul was; to see whether from thence he could discover its immortality. But in all that discourse in his first book of Tusculan Questions, where he lays out so much of his reading and reason, there is not one syllable showing the least thought that the soul was an immaterial substance, but many things directly to the contrary.

' Indeed, 1. he shuts out the body, taken in the sense he uses *corpus* all along, for the sensible organical parts of a man; and is positive that is not the soul: and body in this sense, taken for the human body, he calls the prison of the soul: and says a wise man, instancing in Socrates and Cato, is glad of a fair opportunity to get out of it. But he nowhere says any such thing of matter; he calls not matter in general the prison of the soul, nor talks a word of being separate from it.

' 2. He concludes, that the soul is not, like other things here below, made up of a composition of the elements, c. 27.

' He excludes the two gross elements, earth and water, from being the soul, c. 26.

' So far he is clear and positive: but beyond this, he is uncertain; beyond this, he could not get. For in some places, he speaks doubtfully, whether the soul be not air or fire, *anima sit animus, ignisve, nescio*; c. 25. And therefore he agrees with Panætius, that if it be at all elementary, it is, as he calls it, *inflammata anima*, inflamed air; and for this he gives several reasons, c. 18, 19. And though he thinks it to be of a peculiar nature of its own,

complex ideas of substances, have no visible necessary connexion or inconsistency with other simple ideas, whose coexistence with them we would inform our-

yet he is so far from thinking it immaterial, that he says, c. 19, that the admitting it to be of an aerial or igneous nature, will not be inconsistent with any thing he had said.

‘That which he seems most to incline to, is, that the soul was not at all elementary, but was of the same substance with the heavens; which Aristotle, to distinguish from the four elements, and the changeable bodies here below, which he supposed made up of them, called *quinta essentia*. That this was Tully’s opinion, is plain, from these words: *Ergo animus (qui, ut ego dico, divinus) est, ut Euripides audent dicere, Deus: et quidem, si Deus aut anima aut ignis est, idem est animus hominis. Nam ut illa natura celestis et terra vacat et humore; sic utriusque harum rerum humanus animus est expertus. Sin autem est quinta quædam natura ab Aristotele inducta; primum hæc et Deorum est et animorum. Hanc nos sententiam secuti, his ipsis verbis in Consolatione hæc expressimus, c. 29. And then he goes on, c. 27, to repeat those, his own words, which your lordship has quoted out of him, wherein he had affirmed, in his treatise *De Consolatione*, the soul not to have its original from the earth, or to be mixed or made of any thing earthly; but had said, *Singularis est igitur quædam natura et vis animi, sejuncta ab his usitatæ notique naturis*: whereby he tells us, he meant nothing but Aristotle’s *quinta essentia*; which being unmixed, being that of which the gods and souls consisted, he calls it *divinum caeleste*, and concludes it eternal, it being, as he speaks, *sejuncta ab omni mortali concretione*. From which it is clear, that in all his inquiry about the substance of the soul, his thoughts went not beyond the four elements, or Aristotle’s *quinta essentia*, to look for it. In all which, there is nothing of immateriality, but quite the contrary.*

‘He was willing to believe (as good and wise men have always been) that the soul was immortal; but for that it is plain he never thought of its immateriality, but as the eastern people do, who believe the soul to be immortal, but have nevertheless no thought, no conception of its immateriality. It is remarkable what a very considerable and judicious author says in the case. ‘No opinion,’ says he, ‘has been so universally received, as that of the immortality of the soul; but its immateriality is a truth, the knowledge whereof has not spread so far. And indeed it is extremely difficult to let into the mind of a Siamite the idea of a pure spirit. This the missionaries, who have been longest among them, are positive in. All the Pagans of the East do truly believe that there remains something of a man after his death, which subsists independently and separately from his body. But they give extension and figure to that which remains, and attribute to it all the same members, all the same substances, both solid and liquid, which our bodies are composed of. They only suppose that the

selves about. These ideas being likewise, for the most part, secondary qualities which depend on the primary qualities of their minute or insensible parts, or on

souls are of a matter subtile enough to escape being seen or handled.' Such were the shades and the manes of the Greeks and the Romans. And it is by these figures of the souls, answerable to those of the bodies, that Virgil supposed Æneas knew Palinurus, Dido, and Anchises, in the other world.

'This gentleman was not a man that travelled into those parts for his pleasure, and to have the opportunity to tell strange stories, collected by chance, when he returned; but one chosen for the purpose (and he seems well chosen for the purpose), to inquire into the singularities of Siam. And he has so well acquitted himself of the commission which his Epistle Dedicatory tells us he had, to inform himself exactly of what was most remarkable there, that had we but such an account of other countries of the East, as he has given us of this kingdom, which he was an envoy to, we should be much better acquainted than we are, with the manners, notions, and religions of that part of the world, inhabited by civilised nations, who want neither good sense nor acuteness of reason, though not cast in the mould of the logic and philosophy of our schools.

'But to return to Cicero; it is plain, that in his inquiries about the soul, his thoughts went not at all beyond matter. Thus the expressions that drop from him in several places of this book evidently show. For example, That the souls of excellent men and women ascended into heaven; of others, that they remained here on earth, c. 12. That the soul is hot, and warms the body; that at its leaving the body, it penetrates and divides, and breaks through our thick, cloudy, moist air; that it stops in the region of fire, and ascends no farther, the equality of warmth and weight making that its proper place, where it is nourished and sustained with the same thing wherewith the stars are nourished and sustained, and that by the convenience of its neighborhood it shall there have a clearer view and fuller knowledge of the heavenly bodies, c. 19. That the soul also, from this height, shall have a pleasant and fairer prospect of the globe of the earth, the disposition of whose parts will then lie before it in one view, c. 20. That it is hard to determine what conformation, size, and place, the soul has in the body; that it is too subtile to be seen; that it is in the human body, as in a house, or a vessel, or a receptacle, c. 22. All which are expressions that sufficiently evidence, that he who used them, had not in his mind separated materiality from the idea of the soul.

'It may perhaps be replied, that a great part of this which we find in c. 19 is said on the principles of those who would have the soul to be *anima inflammata*, inflamed air. I grant it. But it is also to be observed, that in this 19th and the two following chapters, he does not only not deny, but even admits, that so material a thing as inflamed air may think,

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something yet more remote from our comprehension ; it is impossible we should know which have a necessary union, or inconsistency one with another, since

‘The truth of the case, in short, is this ; Cicero was willing to believe the soul immortal ; but when he sought in the nature of the soul itself something to establish this his belief into a certainty of it, he found himself at a loss. He confessed he knew not what the soul was ; but the not knowing what it was, he argues, c. 22, was no reason to conclude it was not. And thereon he proceeds to the repetition of what he had said in his 6th book, *De Repub.* concerning the soul. The argument, which, borrowed from Plato, he there makes use of, if it have any force in it, not only proves the soul to be immortal, but more than, I think, your lordship will allow to be true ; for it proves it to be eternal, and without beginning, as well as without end : *Næque nata certe est, et æterna est*, says he.

‘Indeed, from the faculties of the soul, he concludes right, That it is of divine original. But as to the substance of the soul, he at the end of this discourse concerning its faculties, c. 25, as well as at this beginning of it, c. 22, is not ashamed to own his ignorance of what it is : *Anima sit animus, ignisve, nescio ; nec me pudet, ut istos, fateri nescire, quod nesciam. Illud si ulla alia de re obscura affirmare possem, sive anima, sive ignis sit animus, eum jurem esse divinum*, c. 25. So that all the certainty he could attain to about the soul, was, that he was confident there was something divine in it, i. e. there were faculties in the soul that could not result from the nature of matter, but must have their original from a divine power ; but yet those qualities, as divine as they were, he acknowledged might be placed in breath or fire, which your lordship will not deny to be material substances. So that all those divine qualities, which he so much and justly extols in the soul, led him not, as appears, so much as to any the least thought of immateriality. This is demonstration, that he built them not on an exclusion of materiality out of the soul ; for he avowedly professes he does not know, but breath or fire might be this thinking thing in us : and in all his considerations about the substance of the soul itself, he stuck in air or fire, or Aristotle’s *quinta essentia* : for beyond those, it is evident he went not.

‘But with all his proofs out of Plato, to whose authority he defers so much, with all the arguments his vast reading and great parts could furnish him with for the immortality of the soul, he was so little satisfied, so far from being certain, so far from any thought that he had or could prove it, that he over and over again professes his ignorance and doubt of it. In the beginning, he enumerates the several opinions of the philosophers, which he had well studied, about it. And then, full of uncertainty, says, *Harum sententiarum quæ vera sit, Deus aliquis viderit ; quæ verisimillima magna quæstio*, c. 11. And towards the latter end, having gone them all over again, and one after another examined them, he professes himself still at a loss, not knowing on which to pitch,

we know not the root from whence they spring, or the size, figure, and texture of parts on which they depend, and from which they result.

nor what to determine. *Mentis acies*, says he, *seipsam intuens, nonnunquam hebescit, ob eamque causam contemplandi diligentiam amittimus. Itaque dubitans, circumspectans, hesitans, multa adversa revertens, tanquam in rate, in mari immenso, nostra vehitur oratio*, c. 30. And to conclude this argument, when the person he introduces as discouraging with him, tells him he is resolved to keep firm to the belief of immortality, Tully answers, c. 32, *Laudo id quidem, etsi nihil animis oportet considerare: movemur enim sepe aliquo acute concesso; labamur, mutamusque sententiam clarioribus etiam in rebus; in his est enim aliqua obscuritas.*

‘ So unmovable is that truth delivered by the Spirit of truth, that though the light of nature gave some obscure glimmering, some uncertain hopes, of a future state; yet human reason could attain to no clearness, no certainty, about it, but that it was Jesus Christ alone who had brought life and immortality to light, through the Gospel. Though we are now told, that to own the inability of natural reason to bring immortality to light, or which passes for the same, to his own principles on which the immateriality of the soul (and as it is urged consequently, its immortality) cannot be demonstratively proved, does lessen the belief of this article of revelation, which Jesus Christ alone has brought to light, and which consequently the Scripture assures us is established and made certain only by revelation. This would not, perhaps, have seemed strange from those who are justly complained of, for slighting the revelation of the Gospel, and therefore would not be much regarded, if they should contradict so plain a text of Scripture, in favor of their all-sufficient reason. But what use the promoters of scepticism and infidelity, in an age so much suspected by your lordship, may make of what comes from one of your great authority and learning, may deserve your consideration.

‘ And thus, my lord, I hope I have satisfied you concerning Cicero’s opinion about the soul, in his first book of *Tusculan Questions*; which, though I easily believe, as your lordship says, you are no stranger to, yet I humbly conceive you have not shown (and on a careful perusal of that treatise again, I think I may boldly say you cannot show) one word in it that expresses any thing like a notion in Tully of the soul’s immateriality, or its being an immaterial substance.

‘ From what you bring out of Virgil, your lordship concludes, That he, no more than Cicero, does me any kindness in this matter, being both assertors of the soul’s immortality. My lord, were not the question of the soul’s immortality, according to custom, changed here into that of its immortality, which I am no less an assertor of than either of them, Cicero and Virgil do me all the kindness I desired of them in this matter; and that was to

Besides this, there is no discoverable connexion between any secondary quality, and those primary qualities that it depends on. We are so far from

show that they attributed the word *spiritus* to the soul of man, without any thought of its immateriality; and this the verses you yourself bring out of Virgil,

Et cum frigida mors anima seduxerit artus,
Omnibus umbra locis adero; dabis, improbe, poenas,

confirm, as well as those I quoted out of his 6th book; and for this, M. de la Louberie shall be my witness, in the words above set down out of him; where he shows, there be those amongst the heathens of our days, as well as Virgil and others amongst the ancient Greeks and Romans, who thought the souls or ghosts of men departed did not die with the body, without thinking them to be perfectly immaterial; the latter being much more incomprehensible to them than the former. And what Virgil's notion of the soul is, and that *corpus*, when put in contradistinction to the soul, signifies nothing but the gross tenement of flesh and bones, is evident from this verse of his 6th *Æneid*, where he calls the souls which yet were visible

———— Tenues sine corpore vitas.

'Your lordship's answer concerning what is said, Eccles. iii. turns wholly on Solomon's taking the soul to be immortal, which was not what I question; all that I quoted that place for, was to show, that spirit in English might properly be applied to the soul, without any notion of its immateriality, as *רוח* was by Solomon; which, whether he thought the souls of men to be immaterial, does little appear in that passage where he speaks of the souls of men and beasts together, as he does. But farther, what I contended for is evident from that place, in that the word spirit is there applied by our translators to the souls of beasts, which your lordship, I think, does not rank amongst the immaterial, and consequently immortal, spirits, though they have sense and spontaneous motion.

'But you say, If the soul be not of itself a free thinking substance, you do not see what foundation there is in nature for a day of judgment. Answer. Though the heathen world did not of old, nor do to this day, see a foundation in nature for a day of judgment; yet in revelation, if that will satisfy your lordship, every one may see a foundation for a day of judgment, because God has positively declared it; though God has not, by that revelation, taught us what the substance of the soul is; nor has any where said, that the soul of itself is a free agent. Whatsoever any created substance is, it is not of itself, but is by the good pleasure of its Creator: whatever degrees of perfection it has, it has from the

knowing what figure, size, or motion produces—for instance, a yellow color, or sweet taste, or a sharp sound, that we can by no means conceive how any

bountiful hand of its Maker. For it is true in a natural, as well as a spiritual, sense, what St. Paul says, Not that we are sufficient of ourselves to think any thing as of ourselves, but our sufficiency is of God.

‘But your lordship, as I guess by your following words, would argue, that a material substance cannot be a free agent; whereby I suppose you only mean, that you cannot see or conceive how a solid substance should begin, stop, or change its own motion. To which, give me leave to answer, that when you can make it conceivable, how any created, finite, dependant substance can move itself, or alter or stop its own motion, which it must to be a free agent; I suppose you will find it no harder for God to bestow this power on a solid, than an unsolid, created substance. Tully, in the place above quoted, could not conceive this power to be in any thing but what was from eternity; *Cum pateat igitur æternum id esse quod seipsum moveat quis est qui hanc naturam animis esse tributam neget?* But though you cannot see how any created substance, solid or not solid, can be a free agent (pardon me, my lord, if I put in both, till your lordship please to explain it of either, and show the manner how either of them can, of itself, move itself or any thing else), yet I do not think you will so far deny men to be free agents, from the difficulty there is to see how they are free agents, as to doubt whether there be foundation enough for a day of judgment.

‘It is not for me to judge how far your lordship’s speculations reached; but finding in myself nothing to be truer than what the wise Solomon tells me, As thou knowest not what is the way of the spirit, nor how the bones do grow in the womb of her that is with child; even so thou knowest not the works of God, who maketh all things; I gratefully receive and rejoice in the light of revelation, which sets me at rest in many things, the manner whereof my poor reason can by no means make out to me. Omnipotency, I know, can do any thing that contains in it no contradiction: so that I readily believe whatever God has declared, though my reason find difficulties in it which it cannot master. As in the present case, God having revealed that there shall be a day of judgment, I think that foundation enough to conclude men are free enough to be made answerable for their actions, and to receive according to what they have done; though how man is a free agent, surpasses my explication or comprehension.

‘In answer to the place I brought out of St. Luke, your lordship asks, Whether from these words of our Saviour it follows, that a spirit is only the appearance? I answer, No; nor do I know who drew such an inference from them: but it follows that in apparitions there is something that appears, and that which appears is not wholly immaterial; and yet this was properly called *πνεῦμα*,

size, figure, or motion can possibly produce in us the idea of any color, taste, or sound, whatsoever; and there is no conceivable connexion between the one and the other.

Our knowledge therefore of co-existence reaches little farther than experience. Some few indeed of the primary qualities have a necessary dependence, and visible connexion one with another: as figure necessarily supposes extension, receiving or communicating motion by impulse, supposes solidity. But qualities coexistent in any subject, without this dependence and connexion, cannot certainly be known to coexist any farther, than experience by our senses informs us. Thus, though on trial we find gold yellow, weighty, malleable, fusible, and fixed, yet because none of these have any evident dependence, or necessary connexion with the other, we cannot certainly know, that where any four of these are, the fifth will be there also, how highly probable soever it may be: but the highest degree of probability amounts not to certainty; without which there can be no true knowledge: for this coexistence can be no farther known than it is perceived; and it cannot be perceived, but either in particular subjects, by the observation of our senses; or in general, by the necessary connexion of the ideas themselves.

and was often looked on, by those who called it *πνεῦμα* in Greek, and now call it spirit in English, to be the ghost or soul of one departed; which, I humbly conceive, justifies my use of the word spirit, for a thinking voluntary agent, whether material or immaterial.

Your lordship says, That I grant, that it cannot on these principles be demonstrated, that the spiritual substance in us is immaterial: from whence you conclude, That then my grounds of certainty from ideas are plainly given up. This being a way of arguing that you often make use of, I have often had occasion to consider it, and cannot after all see the force of this argument. I acknowledge that this or that proposition cannot on my principles be demonstrated: *ergo*, I grant this proposition to be false, that certainty consists in the perception of the agreement or disagreement of ideas. For that is my ground of certainty, and till that be given up, my grounds of certainty are not given up.

As to incompatibility or repugnancy to coexistence, we may know that any subject can have of each sort of primary qualities but one particular at once. One extension, one figure; and so of sensible ideas peculiar to each sense: for whatever of each kind is present in any subject, excludes all other of that sort: for instance, one subject cannot have two smells, or two colors at the same time.

As to powers of substances, which makes a great part of our inquiries about them, and is no inconsiderable branch of our knowledge: our knowledge as to these reaches little farther than experience; because they consist in a texture and motion of parts, which we cannot by any means come to discover; and I doubt whether with those faculties we have, we shall ever be able to carry our general knowledge much farther in this part. Experience is that which in this part we must depend on; and it were to be wished that it were more improved: we find the advantages some men's generous pains have this way brought to the stock of natural knowledge. And if others, especially the philosophers by fire who pretend to it, had been so wary in their observations, and sincere in their reports, as those who call themselves philosophers ought to have been; our acquaintance with the bodies here about us, and our insight into their powers and operations had been yet much greater.

As to the third sort, the agreement or disagreement of our ideas in any other relation: this is the largest field of knowledge, and it is hard to determine how far it may extend. This part depending on our sagacity in finding intermediate ideas, that may show the habitudes and relations of ideas; it is a hard matter to tell when we were at an end of such discoveries. They that are ignorant of Algebra cannot imagine the wonders in this kind that are to be done by it: and what farther improvements and helps, advantageous to other

parts of knowledge, the sagacious mind of man may yet find out, it is not easy to determine. This at least I believe, that the ideas of quantity, are not those alone that are capable of demonstration and knowledge: and that other, perhaps more useful parts of contemplation, would afford us certainty, if vices, passions, and domineering interest did not oppose or menace endeavors of this kind.

The idea of a supreme Being, infinite in power, goodness, and wisdom, whose workmanship we are, and on whom we depend; and the idea of ourselves, as understanding rational creatures, would, I suppose, if duly considered, afford such foundations of our duty, and rules of action, as might place morality among the sciences capable of demonstration: wherein I doubt not but from principles as incontestable as those of the mathematics, by necessary consequences, the measure of right and wrong might be made out, to any one that will apply himself with the same indifferency and attention to the one, as he does to the other of these sciences. The relations of other modes may certainly be perceived as well as those of number and extension. Where there is no property there is no injustice, is a proposition as certain as any demonstration in Euclid: for the idea of property being a right to any thing; and the idea of injustice being the invasion or violation of that right; it is evident that these ideas being thus established, and these names annexed to them, I can as certainly know this proposition to be true, as that a triangle has three angles equal to two right ones. Again, no government allows absolute liberty. The idea of government being the establishment of society on certain rules or laws; which require conformity to them; and the idea of absolute liberty, being for any one to do whatever he pleases, I am as capable of being certain of the truth of this proposition as of any in mathematics.

What has given the advantage to the ideas of quantity, and made them thought more capable of certainty and demonstration, is,

1. That they can be represented by sensible marks, which have a nearer correspondence with them, than any words or sounds. Diagrams drawn on paper are copies of the ideas, and not liable to the uncertainty that words carry in their signification. But we have no sensible marks that resemble our moral ideas, and nothing but words to express them by ; which, though, when written, they remain the same, yet the ideas they stand for may change in the same man, and it is very seldom that they are not different in different persons.

2. Moral ideas are commonly more complex than figures ; whence these two inconveniences follow : First, that their names are of more uncertain signification ; the precise collection of simple ideas they stand for not being so easily agreed on, and so the sign that is used for them in communication always, and in thinking often, does not steadily carry with it the same idea. Secondly, the mind cannot easily retain these precise combinations so exactly and perfectly as is necessary ; in the examination of the habitudes and correspondences, agreements or disagreements of several of them one with another, especially where it is to be judged of by long deductions, and the intervention of several other complex ideas, to show the agreement or disagreement of two remote ones.

Now one part of these disadvantages in moral ideas, which has made them be thought not capable of demonstration, may in a good measure be remedied by definitions, setting down that collection of simple ideas which every term shall stand for, and then using the terms steadily and constantly for that precise collection.

As to the fourth sort of knowledge, viz. of the real actual existence of things, we have an intuitive know-

lege of our own existence ; a demonstrative knowledge of the existence of God ; and a sensitive knowledge of the objects that present themselves to our senses.

From what has been said we may discover the causes of our ignorance, which are chiefly these three : 1. want of ideas ; 2. want of a discoverable connexion between the ideas we have ; 3. want of tracing and examining our ideas.

1. There are some things we are ignorant of for want of ideas. All the simple ideas we have are confined to the observation of our senses, and the operation of our minds, that we are conscious of in ourselves. What other ideas it is possible other creatures may have, by the assistance of other senses and faculties more or perfecter than we have, or different from ours, it is not for us to determine ; but to say or think there are no such, because we conceive nothing of them, is no better an argument, than if a blind man should be positive in it, that there was no such thing as sight and colors, because he had no manner of idea of any such thing. What faculties, therefore, other species of creatures have to penetrate into the nature and inmost constitutions of things, we know not. This we know, and certainly find, that we want other views of them, besides those we have to make discoveries of them more perfect. The intellectual and sensible world are in this perfectly alike, that the parts which we see of either of them hold no proportion with that we see not ; and whatsoever we can reach with our eyes, or our thoughts of either of them, is but a point, almost nothing, in comparison of the rest.

Another great cause of ignorance, is the want of ideas that we are capable of. This keeps us in ignorance of things we conceive capable of being known. Bulk, figure, and motion, we have ideas of : yet, not knowing what is the particular bulk, motion ; and figure of the greatest part of the bodies of the uni-

we are ignorant of the several powers, efficacies, and ways of operation, whereby the effects we daily see are produced. These are hid from us in some things, by being too remote; in others, by being too minute.

When we consider the vast distance of the known and visible parts of the world, and the reasons we have to think that what lies within our ken is but a small part of the immense universe; we shall then discover a huge abyss of ignorance. What are the particular fabrics of the great masses of matter, which make up the whole stupendous frame of corporeal beings, how far they are extended, and what is their motion, and how continued, and what influence they have on one another, are contemplations that at first glimpse our thoughts lose themselves in. If we confine our thoughts to this little canton, I mean this system of our sun, and the grosser masses of matter that visibly move about it; what several sorts of vegetables, animals, and intellectual corporeal beings, infinitely different from those of our little spot of earth, may probably be in other planets, to the knowledge of which, even of their outward figures and parts, we can no way attain, whilst we are confined to this earth, there being no natural means, either by sensation or reflection, to convey their certain ideas into our minds!

There are other bodies in the universe, no less concealed from us by their minuteness. These insensible corpuscles being the active parts of matter, and the great instruments of nature, on which depend all their secondary qualities and operations, our want of precise distinct ideas of their primary qualities keeps us in incurable ignorance of what we desire to know about them. Did we know the mechanical affections of rhubarb and opium, we might as easily account for their operations of purging and causing sleep, as a watchmaker can for the motions of his watch. The

dissolving of silver in aquafortis, or gold in aqua-regia, and not *vice versa*, would be then, perhaps, no more difficult to know, than it is to a smith to understand why the turning of one key will open a lock, and not the turning of another. But whilst we are destitute of senses, acute enough to discover the minute particles of bodies, and to give us ideas of their mechanical affections, we must be content to be ignorant of their properties and operations; nor can we be assured about them any farther, than some few trials we make are able to reach: but whether they will succeed again another time, we cannot be certain. This hinders our certain knowlege of universal truths concerning natural bodies; and our reason carries us herein very little beyond particular matter of fact.

And therefore I am apt to doubt, that how far soever human industry may advance useful and experimental philosophy in physical things, yet scientific will still be out of our reach; because we want perfect and adequate ideas of those very bodies which are nearest to us, and most under our command.

This at first sight shows us how disproportionate our knowlege is to the whole extent, even of material beings: to which, if we add the consideration of that infinite number of spirits that may be, and probably are, which are yet more remote from our knowlege, whereof we have no cognisance; we shall find this cause of ignorance conceal from us, in an impenetrable obscurity, almost the whole intellectual world: a greater, certainly, and a more beautiful world than the material. For, bating some very few ideas of spirit we get from our own mind by reflection, and from thence the best we can collect, of the Father of all spirits, the Author of them, and us, and all things, we have no certain information, so much as of the existence of other spirits, but by revelation: much less have we distinct ideas of their different natures, states,

powers, and several constitutions, wherein they agree or differ one from another, and from us ; and, therefore, in what concerns their different species and properties, we are under an absolute ignorance.

The second cause of ignorance is the want of discoverable connexion between those ideas we have : where we want that, we are utterly incapable of universal and certain knowledge ; and are, as in the former case, left only to observation and experiment. Thus the mechanical affections of bodies, having no affinity at all with the ideas they produce in us, we can have no distinct knowledge of such operations beyond our experience ; and can reason no otherwise about them, than as the effects or appointment of an infinitely wise Agent, which perfectly surpass our comprehensions.

The operation of our minds on our bodies is as unconceivable. How any thought should produce a motion in body, is as remote from the nature of our ideas, as how any body should produce any thought in the mind. That it is so, if experience did not convince us, the consideration of the things themselves would never be able in the least to discover to us.

In some of our ideas there are certain relations, habitudes, and connexions, so visibly included in the nature of the ideas themselves, that we cannot conceive them separable from them by any power whatsoever : in these only we are capable of certain and universal knowledge. Thus the idea of a right-lined triangle necessarily carries with it an equality of its angles to two right ones. But the coherence and continuity of the parts of matter, the production of sensation in us, of colors and sounds, &c. by impulse and motion, being such wherein we can discover no natural connexion with any ideas we have, we cannot but ascribe them to the arbitrary will and good pleasure of the wise Architect. The things that we observe constantly to proceed regularly, we may conclude do act by a law set them ; but yet by a

law that we know not; whereby, though causes work steadily, and effects flow constantly from them, yet their connexions and dependences being not discoverable in our ideas, we can have but experimental knowlege of them. Several effects come every day within the notice of our senses, of which we have so far sensitive knowlege. But the causes, manner, and certainty of their production, we must, for the foregoing reasons, be content to be ignorant of. In these we can go no farther than particular experience informs us of matter of fact, and by analogy guess what effects the like bodies are on other trials like to produce. But as to perfect science of natural bodies (not to mention spiritual beings) we are, I think, so far from being capable of any such thing, that I conclude it lost labor to seek after it.

The third cause of ignorance is our want of tracing those ideas we have, or may have; and finding out those intermediate ideas which may show us what habitude of agreement or disagreement they may have one with another: and thus many are ignorant of mathematical truths, for want of application in inquiring, examining, and by due ways comparing those ideas.

Hitherto we have examined the extent of our knowlege, in respect of the several sorts of beings that are. There is another extent of it, in respect of universality, which will also deserve to be considered; and in this regard our knowlege follows the nature of our ideas. If the ideas are abstract, whose agreement or disagreement we perceive, our knowlege is universal. For what is known of such general ideas will be true of every particular thing in which that essence, that is, that abstract idea, is to be found: and what is once known of such ideas, will be perpetually and for ever true. So that, as to all general knowlege, we must search and find it only in our own minds: and it is only the examining of our own

ideas that furnishes us with that. Truths belonging to essences of things (that is, to abstract ideas) are eternal, and are to be found out by the contemplation only of those essences, as the existence of things is to be known only from experience. But I shall say more of this in the following chapters, where I shall speak of general and real knowledge.

CHAPTER IV.

Of the Reality of our Knowledge.

I doubt not but my reader, by this time, may be apt to think that I have been all this while only building a castle in the air; and be ready to object—If it be true, that all knowledge lies only in the perception of the agreement or disagreement of our own ideas, the visions of an enthusiast, and the reasonings of a sober man will be equally certain: it is no matter how things are; so a man observe but the agreement of his own imaginations, and talk conformably, it is all truth, all certainty. That an harpy is not a centaur, is by this way as certain knowledge, and as much truth, as that a square is not a circle. But of what use is all this knowledge of men's own imaginations to a man that inquires after the reality of things?

To which I answer, that if our knowledge of our ideas should terminate in them, and reach no farther, where there is something farther intended, our most serious thoughts would be of little more use than the reveries of a crazy brain. But I hope, before I have done, to make it evident, that this way of certainty by the knowledge of our own ideas goes a little farther than bare imagination; and that all the certainty of general truths a man has, lies in nothing else but this knowledge of our ideas.

It is evident that the mind knows not things immediately, but by the intervention of the ideas it has of

them. Our knowlege therefore is real, only so far as there is a conformity between our ideas and the reality of things. But how shall we know when our ideas agree with things themselves? I answer, there be two sorts of ideas that we may be assured agree with things: these are,

1. Simple ideas; which since the mind can by no means make to itself, must be the effect of things operating on the mind in a natural way; and producing therein those perceptions, which, by the will of our Maker, they are ordained and adapted to. Hence it follows, that simple ideas are not fictions of our fancies, but the natural and regular productions of things without us, really operating on us; which carry with them all the conformity our state requires, which is to represent things under those appearances they are fitted to produce in us. Thus, the idea of whiteness, as it is in the mind, exactly answers that power which is in any body to produce it there. And this conformity between our simple ideas, and the existence of things, is sufficient for real knowlege.

2. All our complex ideas, except those of substances, being archetypes of the mind's own making, and not referred to the existence of things as to their originals, cannot want any conformity necessary to real knowlege. For that which is not designed to represent any thing but itself, can never be capable of a wrong representation. Here the ideas themselves are considered as archetypes, and things no otherwise regarded, than as they are conformable to them. Thus the mathematician considers the truth and properties belonging to a rectangle or circle only as they are ideas in his own mind, which possibly he never found existing mathematically, that is, precisely true: yet his knowlege is not only certain, but real; because real things are no farther concerned nor intended to be meant by any such propositions, than as things really agree to those archetypes in his mind.

It is true of the idea of a triangle, that its three angles are equal to two right ones ; it is true also of a triangle wherever it exists : what is true of those figures, that have barely an ideal existence in his mind, will hold true of them also, when they come to have a real existence in matter.

Hence it follows, that moral knowlege is as capable of real certainty as mathematics : for certainty being nothing but the perception of the agreement or disagreement of our ideas, and demonstration nothing but the perception of such agreement by the intervention of other ideas ; our moral ideas as well as mathematical, being archetypes themselves, and so adequate or complete ideas, all the agreement or disagreement we shall find in them, will produce real knowlege as well as in mathematical figures. That which is requisite to make our knowlege certain, is the clearness of our ideas ; and that which is required to make it real is, that they answer their archetypes.

But it will here be said, that if moral knowlege be placed in the contemplation of our own moral ideas, and those be of our own making, what strange notions will there be of justice and temperance ? What confusion of virtues and vices, if every man may make what ideas of them he pleases ? I answer, No confusion nor disorder at all, in the things themselves, nor the reasonings about them, no more than there would be a change in the properties of figures, and their relations one to another, if a man should make a triangle with four corners, or a trapezium with four right angles ; that is, in plain English, change the names of the figures, and call that by one name, which is called ordinarily by another. The change of name will indeed at first disturb him, who knows not what idea it stands for : but as soon as the figure is drawn, the consequences and demonstration are plain and clear. Just the same is it in moral know-

lege : let a man have the idea of taking from others, without their consent, what they are justly possessed of, and call this justice if he pleases ; he that takes the name here, without the idea put to it, will be mistaken by joining another idea of his own to that name ; but strip the idea of that name, or take it such as it is in the speaker's mind, and the same things will agree to it, as if you called it injustice.

One thing we are to take notice of, That where God, or any other law-maker, has defined any moral names, there they have made the essence of that species to which that name belongs : and there it is not safe to apply, or use them otherwise. But in other cases it is bare impropriety of speech, to apply them contrary to the common usage of the country they are used in.

3. But the complex ideas which we refer to archetypes without us, may differ from them, and so our knowledge about them may come short of being real : and such are our ideas of substances. These must be taken from something, that does or has existed, and not be made up of ideas arbitrarily put together without any real pattern. Herein therefore is founded the reality of our knowledge concerning substances, that all our complex ideas of them must be such, and such only, as are made up of such simple ones as have been discovered to coexist in nature. And our ideas being thus true, though not perhaps very exact copies, are the subjects of real knowledge of them. Whatever ideas we have, the agreement we find they have with others will be knowledge. If those ideas be abstract, it will be general knowledge : but to make it real concerning substances, the ideas must be taken from the real existence of things. Wherever therefore we perceive the agreement or disagreement of our ideas, there is certain knowledge : and wherever we are sure those ideas agree with the reality of things, there is certain real knowledge.

CHAPTER V.

Of Truth in General.

Truth, in the proper import of the word, signifies the joining or separating of signs ; as the things signified by them do agree or disagree one with another. The joining or separating of signs, is what we call propositions ; so that truth properly belongs only to propositions ; whereof there are two sorts, mental and verbal, as there are two sorts of signs commonly made use of, ideas and words.

It is difficult to treat of mental propositions without verbal : because in speaking of mental, we must make use of words, and then they become verbal. Again, men commonly, in their thoughts and reasonings, use words instead of ideas ; especially if the subject of their meditation contains in it complex ideas. If we have occasion to form mental propositions about white, black, circle, &c. we can, and often do, frame in our minds the ideas themselves, without reflecting on the names. But when we would consider, or make propositions about the more complex ideas, as of a man, vitriol, fortitude, glory, &c. we usually put the name for the idea ; because the idea these names stand for, being for the most part confused, imperfect, and undetermined ; we reflect on the names themselves, as being more clear, certain, distinct, and readier to occur to our thoughts, than pure ideas ; and so we make use of these words instead of the ideas themselves, even when we would meditate and reason within ourselves, and make tacit mental propositions.

We must then observe two sorts of propositions, that we are capable of making : 1. mental propositions, wherein the ideas in our understandings are put together, or separated by the mind, perceiving or judging of their agreement or disagreement ; 2. verbal

propositions, which are words put together or separate in affirmative or negative sentences: so that proposition consists in joining or separating signs: and truth consists in putting together, or separating these signs, according as the things they stand for agree or disagree.

Truth, as well as knowlege, may well come under the distinction of verbal and real; that being only verbal truth, wherein terms are joined according to the agreement or disagreement of the ideas they stand for, without regarding whether our ideas are such as really have, or are capable of having an existence in nature. But then it is they contain real truth, when these signs are joined, as our ideas agree; and when our ideas are such as we know are capable of having an existence in nature; which in substances we cannot know, but by knowing that such have existed.

Truth is the marking down in words the agreement or disagreement of ideas, as it is. Falsehood is the marking down in words the agreement or disagreement of ideas, otherwise than it is; and so far as these ideas thus marked by sounds, agree to their archetypes, so far only is the truth real. The knowlege of this truth consists in knowing what ideas the words stand for, and the perception of the agreement or disagreement of those ideas, according as it is marked by those words.

Besides truth taken in the strict sense before mentioned, there are other sorts of truths: as, 1. moral truth, which is, speaking things according to the persuasion of our own minds; 2. metaphysical truth, which is nothing but the real existence of things conformable to the ideas to which we have annexed their names.

These considerations of truth either having been before taken notice of, or not being much to our present purpose, it may suffice here only to have mentioned them.

CHAPTER VI.

Of universal Propositions, their Truth and Certainty.

The prevailing custom of using sounds for ideas, even when men think and reason within their own breasts, makes the consideration of words and propositions so necessary a part of the treatise of knowledge, that it is very hard to speak intelligibly of the one, without explaining the other. And since general truths, which with reason are most sought after, can never be well made known, and are seldom apprehended, but as conceived and expressed in words; it is not out of our way, in the examination of our own knowledge, to inquire into the truth and certainty of universal knowledge.

But it must be observed, that certainty is twofold, certainty of truth, and certainty of knowledge. Certainty of truth is, when words are so put together in propositions, as exactly to express the agreement or disagreement of the ideas they stand for, as really it is. Certainty of knowledge, is to perceive the agreement or disagreement of ideas as expressed in any propositions. This we usually call knowing, or being certain of the truth of any proposition.

Now because we cannot be certain of the truth of any general proposition, unless we know the precise bounds and extent of the species its terms stand for; it is necessary we should know the essence of each species, which is that which constitutes and bounds it. This in all simple ideas and modes is not hard to do: for in these the real and nominal essence being the same, there can be no doubt how far the species extends, or what things are comprehended under each term: which it is evident are all that have an exact conformity with the ideas it stands for, and no other. But in substances wherein a real essence, distinct from the nominal, is supposed to constitute and bound the

species, the extent of the general word is very uncertain; because, not knowing this real essence, we cannot know what is, or is not of that species, and consequently what may, or may not with certainty be affirmed of it.

Hence we may see that the names of substances; when made to stand for species, supposed to be constituted by real essences, which we know not, are not capable of conveying certainty to the understanding. Of the truth of general propositions made up of such terms we cannot be sure. For how can we be sure that this or that quality is in gold, for instance, when we know not what is, or is not gold; that is, what has, or has not the real essence of gold, whereof we have no idea at all.

On the other side, the names of substances, when made use of for the complex ideas men have in their minds; though they carry a clear and determinate signification with them, will not yet serve us to make many universal propositions, of whose truth we can be certain: because the simple ideas, out of which the complex are combined, carry not with them any discoverable connexion of repugnancy, but with a very few other ideas.

For instance, All gold is fixed, is a proposition we cannot be certain of, how universally soever it be believed: for if we take the term gold to stand for a real essence, it is evident we know not what particular substances are of that species, and so cannot with certainty affirm any thing universally of gold. But if we make the term gold stand for a species, determined by its nominal essence, be its complex idea what it will; for instance, a body yellow, fusible, malleable, and very heavy; no quality can with certainty be denied or affirmed universally of it, but what has a discoverable connexion, or inconsistency with that nominal essence. Fixedness, for instance, having no necessary connexion that we can discover

with any simple idea that makes the complex one, or with the whole combination together ; it is impossible that we should certainly know the truth of this proposition, All gold is fixed. But is not this an universal certain proposition, All gold is malleable ? I answer, it is so, if malleableness be a part of the complex idea the word gold stands for : but then here is nothing affirmed of gold, but that, that sound stands for an idea, in which malleableness is contained. And such a sort of truth and certainty it is, to say a centaur is four-footed.

I imagine amongst all the secondary qualities of substances, and the powers relating to them, there cannot any two be named, whose necessary coexistence or repugnance to coexist can be certainly known, unless in those of the same sense, which necessarily exclude one another. Thus by the color we cannot certainly know what smell, taste, &c. any body is of.

It is no wonder then that certainty is to be found but in very few general propositions concerning substances : our knowlege of their qualities and properties goes very seldom farther than our senses reach, or inform us. Inquisitive and observing men may, by strength of judgment, penetrate farther ; and on probabilities taken from wary observations and hints well laid together, often guess right at what experience has not yet discovered to them : but this is but guessing still ; it amounts only to opinion, and has not that certainty which is requisite to knowlege.

To conclude : General propositions, of what kind soever, are then only capable of certainty, when the terms used in them stand for such ideas, whose agreement or disagreement, as there expressed, is capable to be discovered by us : and we are then certain of their truth or falsehood, when we perceive the ideas they stand for, to agree or not agree, according as they are affirmed or denied one of another ; whence

we may take notice, that general certainty is never to be found but in our ideas. Whenever we go to seek it elsewhere in experiment or observations without us, our knowlege goes not beyond particulars.

CHAPTER VII.

Of Maxims.

There are a sort of propositions, which, under the name of maxims and axioms, have passed for principles of science; and, because they are self-evident, have been supposed innate. But if those, who would persuade us that there are innate principles, had considered, separately, the parts out of which those propositions are made, they would not, perhaps, have been so forward to believe they were innate: since, if the ideas, which made up those truths, were not, it was impossible that the propositions, made up of them, should be innate, or our knowlege of them be born with us. For if the ideas be not innate, there was a time when the mind was without those principles; and then, they will not be innate, but be derived from some other original. It is impossible for the same thing to be, and not to be, is certainly (if there be any such) an innate principle. But the names impossibility and identity stand for two ideas, so far from being innate, or born with us, that I think it requires great care and attention to form them right in our understanding. They are so far from being brought into the world with us, so remote from the thoughts of infancy and childhood, that I believe, on examination, it will be found that many grown men want them.

It may be worth while likewise to inquire into the reason of the evidence of these maxims, and examine how far they influence our other knowlege. Know-

lege being but the perception of the agreement or disagreement of ideas, where that agreement or disagreement is perceived immediately by itself, without the intervention or help of any other ideas, there our knowlege is self-evident : which being so, not only maxims, but an infinite number of other propositions partake equally with them in this self-evidence. For,

In respect of identity and diversity, we may have as many self-evident propositions as we have distinct ideas. It is the first act of the mind, to know every one of its ideas by itself, and distinguish it from others. Every one finds in himself, that he knows the ideas he has ; that he knows also when any one is in his understanding, and what it is ; and that when more than one are there, he knows them distinctly and unconfusedly, one from another ; so that all affirmations, or negations concerning them, are made without any possibility of doubt or uncertainty ; and must necessarily be assented to as soon as understood : that is, as soon as we have in our minds the ideas clear and distinct, which the terms in the proposition stand for. Thus, A circle is a circle, Blue is not red, are as self-evident propositions, as those general ones, What is is, and It is impossible for the same thing to be and not to be ; nor can the consideration of these axioms add any thing to the evidence, or certainty of our knowlege of them.

As to the agreement or disagreement of coexistence, the mind has an immediate perception of this but in very few. And therefore, in this sort we have very little intuitive knowlege ; though, in some few propositions we have. Two bodies cannot be in the same place, I think is a self-evident proposition ; the idea of fitting a place equal to the contents of its superficies being annexed to our idea of body.

As to the relations of modes, mathematicians have framed many axioms concerning that one relation of equality, as Equals taken from equals, the remainder

will be equal, &c. which, however received for axioms, yet I think have not a clearer self-evidence than these, that One and one are equal to two : that If from the five fingers of one hand you take two, and from the five fingers of the other hand two, the remaining numbers will be equal. These and a thousand other such propositions may be found in numbers, which carry with them an equal, if not greater clearness than those mathematical axioms.

As to real existence, since that has no connexion with any other of our ideas, but that of ourselves, and of a first Being; we have not so much as a demonstrative, much less a self-evident knowlege, concerning the real existence of other beings.

In the next place, let us consider what influence these maxims have on the other parts of our knowlege. The rules established in the schools, that all reasonings are *ex præcognitis et præconcessis*, seem to lay the foundation of all other knowlege in these maxims, and to suppose them to be *præcognita*; whereby I think is meant two things: 1. that these axioms are those truths that are first known to the mind; 2. that on them the other parts of our knowlege depend.

1. That these axioms are not the truths first known to the mind, is evident from experience: for who knows not that a child perceives that a stranger is not its mother, long before he knows that it is impossible for the same thing to be and not to be. And how many truths are there about numbers, which the mind is perfectly acquainted with, and fully convinced of, before it ever thought on these general maxims? Of this the reason is plain; for that which makes the mind assent to such propositions, being nothing but the perception it has of the agreement or disagreement of its ideas, according as it finds them affirmed or denied in words one of another; and every idea being known to be what it is, and every two distinct ideas not to be

the same, it must necessarily follow, that such self-evident truths must be first known, which consist of ideas that are first in the mind; and the ideas first in the mind, it is evident, are those of particular things; from whence, by slow degrees, the understanding proceeds to some few general ones, which being taken from the ordinary and familiar objects of sense, are settled in the mind, with general names to them. Thus particular ideas are first received and distinguished, and so knowlege got about them; and next to them the less general or specific, which are next to particular ones.

For abstract ideas are not so obvious or easy to children, or the yet unexercised mind, as particular ones. If they seem so to grown men, it is only because by constant and familiar use they are made so. For when we nicely reflect on them, we shall find, that general ideas carry difficulty with them, and do not so easily offer themselves as we are apt to imagine. It is true, the mind, in this imperfect state, has need of such ideas, and makes all the haste to them it can, for the conveniency of communication and enlargement of knowlege; to both which it is naturally very much inclined.

2. From what has been said, it plainly follows, that these magnified maxims are not the principles and foundations of all our other knowlege: for if there be a great many other truths, as self-evident as they, and a great many that we know before them, it is impossible that they should be the principles from which we deduce all other truths. Thus, that One and two are equal to three, is as evident, and easier known, than that the Whole is equal to all its parts. Nor after the knowlege of this maxim, do we know that One and two are equal to three, better, or more certainly than we did before; for if there be any odds in these ideas, the ideas of whole, and parts, are more obscure, or at least more difficult to be settled in the

mind, than those of one, two, and three. Either, therefore, all knowledge does not depend on certain *præcognita*, or general maxims, called principles; or else, such as these, (that one and one are two, that two and two are four, &c.) and a great part of numeration will be so. To which, if we add all the self-evident propositions that may be made about all our distinct ideas, principles will be almost infinite, at least innumerable, which men arrive to the knowledge of at different ages; and a great many of those innate principles they never come to know all their lives. But whether they come in view early or later, they are all known by their native evidence, and receive no light, nor are capable of any proof one from another; much less the more particular from the more general; or the more simple from the more compounded: the more simple and less abstract being the most familiar, and the easier and earlier apprehended.

These general maxims, then, are only of use in disputes, to stop the mouths of wranglers; but not of much use to the discovery of unknown truths; or to help the mind forwards in its search after knowledge. Several general maxims are no more than bare verbal propositions; and teach us nothing but the respect and import of names, one to another; as, The whole is equal to all its parts,—what real truth does it teach us more, than what the signification of the word *totum*, or whole, does of itself import?

But yet, mathematicians do not without reason place this, and some other such, amongst their maxims; that their scholars having in the entrance perfectly acquainted their thoughts with these propositions made in such general terms, may have them ready to apply to all particular cases: not that if they be equally weighed, they are more clear and evident, than the particular instances they are brought to confirm; but that being more familiar to the mind, the very naming them is enough to satisfy the understanding. But this,

I say, is more from our custom of using them, than the different evidence of the things.

One thing farther, I think, it may not be amiss to observe, concerning those general maxims, that they do not prove the existence of things without us; neither of these two self-evident principles,—viz. What is is, and The same thing cannot be, and be,—will serve to prove to us, that any, or what bodies do exist: for that we are left to our senses, to discover to us as far as they can. Those universal and self-evident principles can assure us of nothing that passes without the mind; they cannot discover or prove to us the least knowledge of the nature of substances, as they are found and exist without us, any farther than grounded on experience.

So that, if rightly considered, I think we may say, that where our ideas are clear and distinct, there is little or no use at all of these maxims, to prove the agreement or disagreement of any of them. He that cannot discern the truth or falsehood of such propositions, without the help of these and the like maxims, will not be helped by these maxims to do it. He that needs any proof to make him certain, and give his assent to this proposition, that Two are equal to two, or that White is not black, will also have need of a proof to make him admit that What is is, or that It is impossible for the same thing to be and not to be.

And as these maxims are of little use, where we have clear and distinct ideas; so they are of dangerous use, where our ideas are confused, and where we use words that are not annexed to clear and distinct ideas; but to such as are of a loose and wandering signification, sometimes standing for one, and sometimes for another idea, from which follows mistake and error, which these maxims (brought as proofs to establish propositions wherein the terms stand for

confused and uncertain ideas) do by their authority confirm and rivet.

CHAPTER VIII.

Of trifling Propositions.

There are universal propositions, which, though they be certainly true, yet add no light to our understandings, bring no increase to our knowledge: such are,

1. All purely identical propositions. These, at first blush, appear to contain no instruction in them: for when we affirm the same term of itself, it shows us nothing but what we must certainly know before, whether such a proposition be either made by, or proposed to us.

2. Another sort of trifling propositions is, when a part of the complex idea is predicated of the name of the whole; a part of the definition, of the word defined, as, Lead is a metal—man an animal. These carry no information at all, to those who know the complex ideas, the names lead and man stand for: indeed to a man that knows the signification of the word metal, and not of the word lead, it is a shorter way to explain the signification of the word lead, by saying it is a metal, than by enumerating the simple ideas one by one, which make up the complex idea of metal.

Alike trifling it is to predicate any one of the simple ideas of a complex one of the name of the whole complex idea; as, All gold is fusible; for fusibility being one of the simple ideas, that goes to the making up the complex one, the sound gold stands for; what can it be but playing with sounds, to affirm that of the name gold, which is comprehended in its received signification? What instruction can it carry, to tell one that which he is supposed to know before? for I am supposed to know the signification of the word another uses to me, or else he is to tell me.

The general propositions that are made about substances, if they are certain, are for the most part but trifling; and if they are instructive, are uncertain; and such as we have no knowledge of their real truth, how much soever constant observation and analogy may assist our judgments in guessing. Hence it comes to pass, that one may often meet with very clear and coherent discourses, that amount yet to nothing. For names of substantial beings, as well as others, having settled significations affixed to them, may with great truth be joined negatively and affirmatively in propositions, as their definitions make them fit to be so joined; and propositions consisting of such terms, may with the same clearness be deduced one from another, as those that convey the most real truths; and all this without any knowledge of the nature of reality of things existing without us. Thus he that has learnt the following words, with their ordinary acceptations annexed to them, viz. substance, man, animal, form, soul, vegetative, sensitive, rational, may make several undoubted propositions about the soul, without any knowledge at all of what the soul really is. And of this sort a man may find an infinite number of propositions, reasonings and conclusions, in books of metaphysics, school-divinity, and some part of natural philosophy; and after all, know as little of God, spirits, or bodies, as he did before he set out.

3. The worst sort of trifling is, to use words loosely and uncertainly, which sets us yet farther from the certainty of knowledge we hope to attain to by them, or find in them. That which occasions this, is, that men may find it convenient to shelter their ignorance or obstinacy, under the obscurity or perplexedness of their terms; to which, perhaps, inadvertency and ill custom does in many men much contribute.

To conclude, barely verbal propositions may be known by these following marks.

1. All propositions, wherein two abstract terms are affirmed one of another, are barely about the signification of sounds. For since no abstract idea can be the same with any other, but itself; when its abstract name is affirmed of any other term, it can signify no more but this, that it may or ought to be called by that name; or that these two names signify the same idea.

2. All propositions, wherein a part of the complex idea, which any term stands for, is predicated of that term, are only verbal: and thus all propositions wherein more comprehensive terms called genera, are affirmed of subordinate, or less comprehensive, called species, or individuals, are barely verbal. When by these two rules we examine the propositions that make up the discourses we ordinarily meet with, both in and out of books; we shall perhaps find, that a greater part of them than is usually suspected, are purely about the signification of words, and contain nothing in them but the use and application of these signs.

CHAPTER IX.

Of our Knowledge of Existence.

Hitherto we have only considered the essences of things, which, being only abstract ideas, and thereby removed in our thoughts from particular existence, give us no knowledge of existence at all. We proceed now to inquire concerning our knowledge of the existence of things, and how we come by it.

I say then, that we have the knowledge of our own existence, by intuition; of the existence of God, by demonstration; and of other things, by sensation.

As for our own existence, we perceive it so plainly, that it neither needs, nor is capable of any proof. I think, I reason; I feel pleasure and pain:—can any of these be more evident to me than my own existence?

If I doubt of all other things, that very doubt makes me perceive my own existence, and will not suffer me to doubt of that. If I know I doubt, I have as certain a perception of the thing doubting, as of that thought which I call doubt. Experience then convinces us that we have an intuitive knowlege of our own existence; and an internal infallible perception that we are. In every act of sensation, reasoning, or thinking, we are conscious to ourselves of our own being, and in this matter come not short of the highest degree of certainty.

CHAPTER X.

Of our Knowlege of the Existence of a God.

Though God has given us no innate ideas of himself, yet having furnished us with those faculties our minds are endowed with, he hath not left himself without a witness, since we have sense, perception, and reason, and cannot want a clear proof of him, as long as we carry ourselves about us: nor can we justly complain of our ignorance in this great point, since he has so plentifully provided us with means to discover, and know him, so far as is necessary to the end of our being, and the great concernment of our happiness. But though this be the most obvious truth that reason discovers, yet it requires thought and attention: and the mind must apply itself to a regular deduction of it, from some part of our intuitive knowlege; or else we shall be as ignorant of this as of other propositions which are in themselves capable of clear demonstration. To show therefore, that we are capable of knowing, that is, being certain, that there is a God; and how we may come by this certainty, I think we need go no farther than ourselves, and that undoubted knowlege we have of our own existence.

I think it is beyond question, that man has a clear

Locke.

X

perception of his own being : he knows certainly that he exists, and that he is something.

In the next place, man knows by an intuitive certainty, that bare nothing can no more produce any real being, than it can be equal to two right angles. If therefore we know there is some real being, it is an evident demonstration, that from eternity there has been something ; since what was not from eternity had a beginning ; and what had a beginning, must be produced by something else.

Next, it is evident, that what has its being from another, must also have all that which is in, and belongs to its being from another too : all the powers it has must be owing to, and received from the same source. This eternal source then of all being must be also the source and original of all power ; and so this eternal being must be also the most powerful.

Again, man finds in himself perception and knowledge : we are certain then that there is not only some being, but some knowing, intelligent being in the world. There was a time, then, when there was no knowing being, or else there has been a knowing being from eternity. If it be said, There was a time when that eternal being had no knowledge ; I reply, that then it is impossible there should have ever been any knowledge. It being as impossible that things wholly void of knowledge, and operating blindly, and without any perception, should produce a knowing being, as it is that of a triangle should make itself three angles, bigger than two right ones.

Thus from the consideration of ourselves, and what we infallibly find in our constitutions, our reason leads us to the knowledge of this certain and evident truth, that there is an eternal, most powerful, and knowing being, which, whether any one will call God, it matters not. The thing is evident, and from this idea, duly considered, will be deduced all those other attributes we ought to ascribe to this eternal being.

From what has been said, it is plain to me, we have a more certain knowledge of the existence of a God, than of any thing our senses have not immediately discovered to us. Nay, I presume I may say, that we more certainly know that there is a God, than that there is any thing else without us. When I say, we know, I mean, there is such a knowledge within our reach, which we cannot miss, if we will but apply our minds to that, as we do to several other inquiries.

It being then unavoidable for all rational creatures to conclude, that something has existed from eternity; let us next see what kind of thing that must be. There are but two sorts of beings in the world, that man knows or conceives: 1. such as are purely material, without sense or perception, as the clippings of our beards, and paring of our nails; 2. sensible perceiving beings, such as we find ourselves to be. These two sorts we shall hereafter call cogitative and incogitative beings: which to our present purpose are better than material and immaterial.

If then there must be something eternal, it is very obvious to reason, that it must necessarily be a cogitative being; because it is as impossible to conceive that every bare incogitative matter should produce a thinking intelligent being, as that nothing should of itself produce matter. Let us suppose any parcel of matter eternal, we shall find it in itself unable to produce any thing. Let us suppose its parts firmly at rest together: if there were no other being in the world, must it not eternally remain so, a dead inactive lump? Is it possible to conceive it can add motion to itself, or produce any thing? Matter then by its own strength cannot produce, in itself, so much as motion. The motion it has, must also be from eternity, or else added to matter by some other being, more powerful than matter. But let us suppose motion eternal too; yet matter, incogitative matter and motion could never

produce thought: knowledge will still be as far beyond the power of motion and matter to produce, as matter is beyond the power of nothing to produce. Divide matter into as minute parts as you will, vary the figure and motion of it as much as you please, it will operate no otherwise on other bodies of proportionable bulk, than it did before this division. The minutest particles of matter knock, impel, and resist one another, just as the greater do, and that is all they can do; so that if we will suppose nothing eternal, matter can never begin to be. If we suppose bare matter without motion eternal, motion can never begin to be. If we suppose only matter and motion eternal, thought can never begin to be: for it is impossible to conceive that matter, either with or without motion, could have originally, in and from itself, sense, perception, and knowledge; as is evident from hence, that then sense, perception, and knowledge, must be a property eternally inseparable from matter, and every particle of it. Since therefore whatsoever is the first eternal being must necessarily be cogitative; and whatsoever is first of all things must necessarily contain in it, and actually have, at least, all the perfections that can ever after exist, it necessarily follows, that the first eternal being cannot be matter.

If therefore it be evident that something necessarily must exist from eternity, it is also as evident, that that something must necessarily be a cogitative being: for it is as impossible that incogitative matter should produce a cogitative being, as that nothing, or the negation of all being, should produce a positive being or matter.

This discovery of the necessary existence of an eternal mind does sufficiently lead us into the knowledge of God. For it will hence follow, that all other knowing beings, that have a beginning, must depend on him, and have no other ways of knowledge or extent of power, than what he gives them:

and therefore if he made those, he made also the less excellent pieces of this universe, all inanimate bodies, whereby his omniscience, power, and providence will be established; and from thence all his other attributes necessarily follow.

CHAPTER XI.

Of our Knowledge of the Existence of other Things.

The knowledge of our own being we have by intuition: the existence of a God, reason clearly makes known to us, as has been shown: the knowledge of the existence of any other thing, we can have only by sensation; for there being no necessary connexion of real existence with any idea a man hath in his memory; nor of any other existence, but that of God, with the existence of any particular man; no particular man can know the existence of any other being, but only, when by actually operating on him, it makes itself be perceived by him. The having the idea of any thing in our mind, no more proves the existence of that thing, than the picture of a man evidences his being in the world, or the visions of a dream make thereby a true history. It is therefore the actual receiving of ideas from without that gives us notice of the existence of other things, and makes us know that something doth exist at that time without us, which causes that idea in us, though perhaps we neither know nor consider how it does it; for it takes not from the certainty of our senses, and the ideas we receive by them, that we know not the manner wherein they are produced.

This notice we have by our senses of the existing of things without us, though it be not altogether so certain as intuition and demonstration, deserves the name of knowledge, if we persuade ourselves that our faculties act and inform us right, concerning the existence

of those objects that affect them. But besides the assurance we have from our senses themselves, that they do not err in the information they give us of the existence of things without us, we have other concurrent reasons ; as,

1. It is plain those perceptions are produced in us by exterior causes affecting our senses, because those that want the organs of any sense never can have the ideas belonging to that sense produced in their minds. This is too evident to be doubted, and therefore we cannot but be assured that they come in by the organs of that sense, and no other way.

2. Because we find sometimes that we cannot avoid the having those ideas produced in our minds : when my eyes are shut, I can at pleasure recall to my mind the ideas of light or the sun, which former sensations had lodged in my memory ; but if I turn my eyes towards the sun, I cannot avoid the ideas which the light or the sun then produces in me : which shows a manifest difference between those ideas laid up in the memory, and such as force themselves on us, and we cannot avoid having. And therefore it must needs be some exterior cause, whose efficacy I cannot resist, that produces those ideas in my mind, whether I will or no.

Besides, there is nobody who doth not perceive the difference in himself, between actually looking on the sun, and contemplating the idea he has of it in his memory ; and therefore he hath certain knowledge, that they are not both memory or fancy ; but that actual seeing has a cause without.

3. Add to this, that many ideas are produced in us with pain, which we afterwards remember without the least offence. Thus the pain of heat or cold, when the idea of it is received in our minds, gives us no disturbance ; which when felt was very troublesome ; and we remember the pain of hunger, thirst, headache, &c. without any pain at all ; which would either

never disturb us, or else constantly do it, as often as we thought of it, were there nothing more but ideas floating in our minds, and appearances entertaining our fancies, without the real existence of things affecting us from abroad.

4. Our senses in many cases bear witness to the truth of each other's report, concerning the existence of sensible things without us : he that doubts when he sees a fire, whether it be real, may, if he please, feel it too ; and, by the exquisite pain, he will be convinced that it is not a bare idea or phantom.

If, after all this, any one will be so sceptical as to distrust his senses, and to question the existence of all things, or our knowledge of any thing ; let him consider that the certainty of things existing in *rerum natura*, when we have the testimony of our senses for it, is not only as great as our frame can attain to, but as our condition needs. For our faculties being not suited to the full extent of being, nor a clear comprehensive knowledge of all things, but to the preservation of us, in whom they are, and accommodated to the use of life ; they serve our purpose well enough if they will but give us certain notice of those things that are convenient or inconvenient to us. For he that sees a candle burning, and has experimented the force of the flame by putting his finger in it, will little doubt that this is something existing without him, which does him harm, and puts him to pain, which is assurance enough ; when no man requires greater certainty to govern his actions by, than what is as certain as his actions themselves : so that this evidence is as great as we can desire, being as certain to us as our pleasure or pain, that is, happiness or misery, beyond which we have no concernment either of knowing or being.

In fine, when our senses do actually convey into our understandings any idea, we are assured that there is something at that time really existing without us.

But this knowledge extends only as far as the present testimony of our senses, employed about particular objects that do then affect them, and no farther. My seeing a man a minute since, is no certain argument of his present existence; since there is no necessary connexion of his existence a minute since, with his existence now.

As when our senses are actually employed about any object, we know that it does exist; so by our memory we may be assured, that heretofore things that affected our senses have existed: and thus we have the knowledge of the past existence of several things; whereof our senses having informed us, our memories still retain the ideas: and of this we are past all doubt, so long as we remember well.

As to the existence of spirits, our having ideas of them, does not make us know that any such things do exist without us; or that there are any finite spirits; or any other spiritual beings but the Eternal God. We have ground from revelation, and several other reasons, to believe with assurance, that there are such creatures: but our senses not being able to discover them, we want the means of knowing their particular existence; for we can no more know that there are finite spirits really existing, by the idea we have of such beings, than, by the ideas any one has of fairies or centaurs, he can come to know that things answering those ideas do really exist.

Hence we may gather, that there are two sorts of propositions, one concerning the existence of any thing answerable to such an idea; as that of an elephant, phoenix, motion, or angel; viz. whether such a thing does any where exist: and this knowledge is only of particulars, and not to be had of any thing without us, but only of God, any other way than by our senses.

Another sort of proposition is, wherein is expressed the agreement or disagreement of our abstract ideas,

and their dependence one on another. And these may be universal and certain : so having the idea of God, and myself, of fear and obedience, I cannot but be sure that God is to be feared and obeyed by me ; and this proposition will be certain concerning man in general ; if I have made an abstract idea of such a species, whereof I am one particular. But such a proposition, how certain soever, proves not to me the existence of men in the world ; but will be true of all such creatures, whenever they do exist : which certainty of such general propositions, depends on the agreement or disagreement discoverable in those abstract ideas.

In the former case, our knowledge is the consequence of the existence of things, producing ideas in our minds by our senses : in the latter, the consequence of the ideas that are in our minds, and producing these general propositions, many whereof are called *eternæ veritates* ; and all of them indeed are so, not from being written all, or any of them, in the minds of all men, or that they were any of them propositions in any one's mind, till he having got the abstract ideas, joined or separated them by affirmation or negation : but wheresoever we can suppose such a creature as man is, endowed with such faculties, and thereby furnished with such ideas as we have ; we must conclude, he must needs, when he applies his thoughts to the consideration of his ideas, know the truth of certain propositions, that will arise from the agreement or disagreement he will perceive in his own ideas. Such propositions being once made about abstract ideas, so as to be true, they will, whenever they can be supposed to be made again, at any time past, or to come, by a mind having those ideas, always be true. For names being supposed to stand perpetually for the same ideas ; and the same ideas having immutably the same habitudes one to another ;

propositions concerning any abstract ideas that are once true, must needs be eternal verities.

CHAPTER XII.

Of the Improvement of our Knowledge.

It being the received opinion amongst men of letters that maxims are the foundations of all knowledge, and that sciences are each of them built on certain *præcognita*, from whence the understanding was to take its rise, and by which it was to conduct itself in its inquiries in the matters belonging to that science, the beaten road of the schools has been to lay down in the beginning one or more general propositions, called principles, as foundations whereon to build the knowledge that was to be had of that subject.

That which gave occasion to this way of proceeding, was, I suppose, the good success it seemed to have in mathematics, which, of all other sciences, have the greatest certainty, clearness, and evidence, in them. But if we consider it, we shall find that the great advancement and certainty of real knowledge men arrived to in these sciences, was not owing to the influence of these principles, but to the clear, distinct, and complete ideas their thoughts were employed about; and the relation of equality and excess so clear between some of them, that they had an intuitive knowledge; and by that a way to discover it in others; and this without the help of those maxims. For, I ask, is it not possible for a lad to know that his whole body is bigger than his little finger, but by virtue of this axiom, the whole is bigger than the part; nor be assured of it, till he has learned that maxim? Let any one consider from what has been elsewhere said, which is known first and clearest by most people, the particular instance, or the general rule; and which it is that gives life and birth to the other. These

general rules are but the comparing our more general and abstract ideas, which ideas are made by the mind, and have names given them, for the easier dispatch in its reasonings: but knowlege began in the mind, and was founded on particulars; though afterwards, perhaps, no notice be taken thereof: it being natural for the mind to lay up those general notions, and make the proper use of them, which is to disburden the memory of the cumbersome load of particulars.

The way to improve in knowlege, is not to swallow principles, with an implicit faith, and without examination, which would be apt to mislead men, instead of guiding them into truth; but to get and fix in our minds clear and complete ideas, as far as they are to be had, and annex to them proper and constant names: and thus barely by considering our ideas, and comparing them together, observing their agreement or disagreement, their habitudes and relations, we shall get more true and clear knowlege by the conduct of this one rule, than by taking up principles, and thereby putting our minds into the disposal of others.

False or doubtful positions, relied on as unquestionable maxims, keep those in the dark from truth, who build on them. Such are usually the prejudices imbibed from education, party, reverence, fashion, interest, &c. This is the mote which every one sees in his brother's eye, but never regards the beam in his own. To those who are willing to get rid of this great hinderance of knowlege, to those who would shake off this great and dangerous impostor Prejudice, who dresses up falsehood in the likeness of truth, I shall offer this one mark whereby prejudice may be known. He that is strongly of any opinion, must suppose that his persuasion is built on good grounds; and that his assent is no greater than what the evidence of the truth he holds forces him to. Now if, after all his profession, he cannot bear any opposition to his

opinion, if he cannot so much as give a patient hearing to the arguments on the other side, he plainly confesses that it is prejudice governs him ; and it is not the evidence of truth, but some lazy anticipation, some beloved presumption, that he desires to rest undisturbed in.

He that would acquit himself in this case as a lover of truth, must do two things that are not very common nor very easy : 1. he must not be in love with any opinion, or wish it to be true, until he knows it to be so ; for nothing that is false can deserve our good wishes, nor a desire that it should have the force of truth ; and yet nothing is more frequent than this. 2. he must do that which he will find himself very averse to, as judging the thing unnecessary, or himself incapable of doing it. He must try whether his principles be certainly true or not, and how far he may safely rely on them. The inability I here speak of, is not any natural defect that makes men incapable of examining their principles. To such, rules of conducting their understandings are useless, and that is the case of very few. The great number is of those whom the ill habit of never exerting their thoughts has disabled : the powers of their minds are starved by disuse, and have lost that strength which nature fitted them to receive from exercise. In these two things, viz. an equal indifferency for all truth ; I mean the receiving it in the love of it as truth ; and in the examination of our principles, and not receiving any for such till we are fully convinced of their solidity, truth and certainty, consists that freedom of the understanding, which is necessary to a rational creature ; and without which it is conceit, fancy, any thing rather than an understanding. And these two articles ought to be particularly inculcated in education ; the business whereof, in respect of knowledge, is not to perfect a learner in all or any one of the sciences, but to give his mind that freedom, that disposition, and

those habits, that may enable him to attain any part of knowledge he shall apply himself to, or stand in need of in the future course of his life.

We must therefore, if we will proceed as reason advises, adapt our methods of inquiry, to the nature of the ideas we examine, and the truth we search after. General and certain truths are only founded in the habitudes and relations of abstract ideas. Therefore, a sagacious methodical application of our thoughts for the finding out these relations, is the only way to discover all that can with truth and certainty be put into general propositions. By what steps we are to proceed in these, is to be learned in the schools of the mathematicians, who from very plain and easy beginnings, by gentle degrees, and a continued chain of reasonings, proceed to the discovery and demonstration of truths, that appear at first sight beyond human capacity. This, I think I may say, that if other ideas that are real as well as nominal essences of their species, were pursued in the way familiar to mathematicians, they would carry our thoughts farther and with greater evidence and clearness, than possibly we are apt to imagine. This gave me the confidence to advance that conjecture, which I suggest, chapter the third, viz. that morality is capable of demonstration, as well as mathematics; for moral ideas being real essences, that have a discoverable connexion and agreement one with another, so far as we can find their habitudes and relations, so far we shall be possessed of real and general truths.

In our knowledge of substances, we are to proceed after a quite different method: the bare contemplation of their abstract ideas (which are but nominal essences) will carry us but a very little way in the search of truth and certainty. Here experience must teach us what reason cannot; and it is by trying alone, that we can certainly know what other qualities coexist with those of our complex idea; for instance, whether

that yellow, heavy, fusible body, I call gold, be malleable, or no ; which experience (however it prove in that particular body we examine) makes us not certain that it is so in all, or any other yellow, heavy, fusible bodies, but that which we have tried ; because it is no consequence one way or the other from our complex idea : the necessity or inconsistency of malleability has no visible connexion with the combination of that color, weight, and fusibility in any body. What I have here said of the nominal essence of gold, supposed to consist of a body of such a determinate color, weight, and fusibility, will hold true, if other qualities be added to it. Our reasonings from those ideas will carry us but a little way in the certain discovery of the other properties, in those masses of matter wherein all those are to be found. As far as our experience reaches, we may have certain knowledge, and no farther.

I deny not, but a man accustomed to rational and regular experiments, shall be able to see farther into the nature of bodies, and their unknown properties, than one that is a stranger to them. But this is but judgment and opinion, not knowledge and certainty. This makes me suspect that natural philosophy is not capable of being made a science : from experiments and historical observations we may draw advantages of ease and health, and thereby increase our stock of conveniences for this life ; but beyond this, I fear our talents reach not ; nor are our faculties, as I guess, able to advance.

From whence it is obvious to conclude, that since our faculties are not fitted to penetrate the real essences of bodies, but yet plainly to discover to us the being of a God, and the knowledge of ourselves ; enough to give us a clear discovery of our duty, and great concernment ; it will become us, as rational creatures, to employ our faculties about what they are most adapted to, and follow the direction of nature, where it seems

to point us out the way. For it is rational to conclude, that our proper employment lies in those inquiries, and that sort of knowledge which is most suited to our natural capacities, and carries in it our greatest interest, that is, the condition of our eternal state: and therefore it is, I think, that morality is the proper science and business of mankind in general (who are both concerned and fitted to search out their *summum bonum*); as several arts conversant about the several parts of nature are the lot and private talent of particular men, for the common use of human life, and their own particular subsistence in this world.

The ways to enlarge our knowledge, as far as we are capable, seem to me to be these two: the first is to get and settle in our minds, as far as we can, clear, distinct, and constant ideas of those things we would consider and know. For, it being evident that our knowledge cannot exceed our ideas; where they are either imperfect, confused, or obscure, we cannot expect to have certain, perfect, or clear knowledge. The other is the art of finding out the intermediate ideas, which may show us the agreement or repugnancy of other ideas, which cannot be immediately compared.

That these two (and not the relying on maxims, and drawing consequences from some general propositions) are the right method of improving our knowledge, in the ideas of other modes, besides those of quantity, the consideration of mathematical knowledge will easily inform us. Where, first, we shall find that he that has not clear and perfect ideas of those angles or figures, of which he desires to know any thing, is utterly thereby incapable of any knowledge about them. Suppose a man not to have an exact idea of a right angle, scalenum, or trapezium, and it is clear that he will in vain seek any demonstration about them. And, farther, it is evident that it was not the influence of maxims or principles that has led the masters of this science into those wonderful disco-

veries they have made. Let a man of good parts know all the maxims of mathematics never so well, and contemplate their extent and consequences as much as he pleases; he will, by their assistance, I suppose, scarce ever come to know that the square of the hypothenuse, in a right-angled triangle, is equal to the squares of the two other sides. This, and other mathematical truths, have been discovered by the thoughts, otherwise applied. The mind had other objects, other views before it, far different from those maxims which men well enough acquainted with those received axioms, but ignorant of their method, who first made these demonstrations, can never sufficiently admire,

CHAPTER XIII.

Some farther Considerations concerning Knowledge.

Our knowlege, as in other things, so in this, has a great conformity with our sight, that it is neither wholly necessary, nor wholly voluntary. Men that have senses cannot choose but receive some ideas by them; and if they have memory, they cannot but retain some of them; and if they have any distinguishing faculty, cannot but perceive the agreement or disagreement of some of them, one with another. As he that has eyes, if he will open them by day, cannot but see some objects, and perceive a difference in them; yet he may choose whether he will turn his eyes towards an object, curiously survey it, and observe accurately all that is visible in it. But what he does see, he cannot see otherwise than he does: it depends not on his will, to see that black which appears yellow. Just thus it is with our understanding: all that is voluntary in our knowlege, is the employing or withholding any of our faculties from this or that sort of objects, and a more or less accurate survey of them: but they being em-

ployed, our will hath no power to determine the knowlege of the mind, one way or other. That is done only by the objects themselves, as far as they are clearly discovered.

Thus he that has got the ideas of numbers, and hath taken the pains to compare one, two, and three, to six, cannot choose but know that they are equal. He also that hath the idea of an intelligent, but weak and frail being, made by, and depending on another, who is eternal, omnipotent, perfectly wise and good, will as certainly know, that man is to honor, fear, and obey God, as that the sun shines when he sees it. But yet these truths, being never so certain, never so clear, he may be ignorant of either or both of them, who will not take the pains to employ his faculties as he should, to inform himself about them.

CHAPTER XIV.

Of Judgment.

The understanding faculties being given to man, not barely for speculation, but also for the conduct of his life; a man would be at a great loss if he had nothing to direct him but what has the certainty of true knowlege. He that will not eat till he has demonstration that it will nourish him, nor stir till he is infallibly assured of success in his business, will have little else to do but sit still and perish.

Therefore as God hath set some things in broad daylight; as he has given us some certain knowlege, though limited to a few things, in comparison, (probably as a taste of what intellectual creatures are capable of, to excite in us a desire and endeavor after a better state,) so, in the greatest part of our concernment, he has afforded us only the twilight, as I may so say, of probability, suitable to that state of mediocrity and probationership, he has been pleased to place us in here.

Locke.

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The faculty which God has given man to enlighten him, next to certain knowlege, is judgment, whereby the mind takes its idea to agree or disagree, without perceiving a demonstrative evidence in the proofs. The mind exercises this judgment, sometimes out of necessity, where demonstrative proofs and certain knowlege are not to be had; and sometimes out of laziness, unskilfulness, or haste, even where they are to be had.

This faculty of the mind when it is exercised immediately about things, is called judgment; when about truths delivered in words, is most commonly called assent, or dissent. Thus the mind has two faculties conversant about truth and falsehood: 1. knowlege, whereby it certainly perceives, and is undoubtedly satisfied of the agreement or disagreement of any ideas; 2. judgment, which is the putting ideas together, or separating them from one another in the mind, when their certain agreement or disagreement is not perceived, but presumed to be so. And if it so unites or separates them, as in reality things are, it is right judgment.

CHAPTER XV.

Of Probability.

Probability is nothing but the appearance of the agreement or disagreement of two ideas, by the intervention of proofs, whose connexion is not constant, and immutable; or is not perceived to be so; but is, or appears for the most part to be so, and is enough to induce the mind to judge the proposition to be true or false, rather than the contrary.

Of probability there are degrees from the neighborhood of certainty and demonstration, quite down to improbability and unlikeliness, even to the confines of impossibility: and also degrees of assent from certain knowlege and what is next it, full assurance and

confidence, quite down to conjecture, doubt, distrust, and disbelief.

That proposition then is probable, for which there are arguments or proofs to make it pass, or be received for true. The entertainment the mind gives to this sort of propositions is called belief, assent, or opinion. Probability then being to supply the defect of our knowledge, is always conversant about propositions, whereof we have no certainty, but only some inducements to receive them for true.

The grounds of it are in short these two following.

1. The conformity of any thing with our own knowledge, experience, or observation.

2. The testimony of others, vouching their observation and experience. In the testimony of others, is to be considered, 1. the number; 2. the integrity; 3. the skill of the witnesses; 4. the design of the author, if it be a testimony cited out of a book; 5. the consistency of the parts and circumstances of the relation; 6. contrary testimonies.

The mind before it rationally assents or dissents to any probable proposition, ought to examine all the grounds of probability, and see how they make, more or less, for or against it; and on a due balancing of the whole, reject or receive it, with a more or less firm assent, according to the preponderancy of the greater grounds of probability on one side or the other.

CHAPTER XVI.

Of the Degrees of Assent.

The grounds of probability laid down in the foregoing chapter, as they are the foundations on which our assent is built, so are they also the measure whereby its several degrees are (or ought) to be regulated. Only we are to take notice, that no grounds of probability operate any farther on the mind which

searches after truth, and endeavors to judge right, than they appear; at least in the first judgment, or search that the mind makes. It is indeed in many cases impossible, and in most very hard, even for those who have admirable memories, to retain all the proofs, which, on a due examination, made them embrace that side of the question. It suffices that they have once, with care and fairness, sifted the matter as far as they could; and having once found on which side the probability appeared to them, they lay up the conclusion in their memories, as a truth they have discovered; and for the future remain satisfied with the testimony of their memories, that this is the opinion, that by the proofs they have once seen of it, deserves such a degree of their assent as they afford it.

It is unavoidable then that the memory be relied on in this case, and that men be persuaded of several opinions, whereof the proofs are not actually in their thoughts, nay, which perhaps they are not able actually to recall: without this the greatest part of men must be either sceptics, or change every moment, when any one offers them arguments, which, for want of memory, they are not presently able to answer.

It must be owned that men's sticking to past judgments is often the cause of great obstinacy in error and mistake. But the fault is not, that they rely on their memories for what they have before well judged, but because they judged before they had well examined. Who almost is there that hath the leisure, patience, and means to collect together, all the proofs concerning most of the opinions he has, so as safely to conclude that he has a clear and full view, and that there is no more to be alleged for his better information? And yet we are forced to determine ourselves on one side or other: the conduct of our lives, and the management of our great concerns, will not bear delay. For those depend for the most part on the determination of our judgment in points wherein we

are not capable of certain knowlege, and wherein it is necessary for us to embrace one side or the other.

The propositions we receive on inducements of probability, are of two sorts: 1. concerning some particular existence, or matter of fact, which falling under observation, is capable of human testimony; 2. concerning things which, being beyond the discovery of our senses, are not capable of human testimony.

Concerning the first of these, viz. particular matter of fact:

1. Where any particular thing, consonant to the constant observation of ourselves and others in the like case, comes attested with the concurrent reports of all that mention it, we receive it as easily, and build as firmly on it, as if it were certain knowlege. Thus, if all Englishmen who have occasion to mention it, should report, that it froze in England last winter, or the like, I think a man would as little doubt of it, as that seven and four are eleven.

The first and highest degree of probability then is, when the general consent of all men, in all ages, as far as can be known, concurs with a man's own constant experience in the like cases, to confirm the truth of any particular matter of fact, attested by fair witnesses: such are the stated constitutions and properties of bodies, and the regular proceedings of causes and effects in the ordinary course of nature; this we call an argument from the nature of things themselves. For what we and others always observe to be after the same manner, we conclude with reason, to be the effects of steady and regular causes, though they come not within the reach of our knowlege. As, that fire warmed a man, or made lead fluid; that iron sunk in water, swam in quicksilver. A relation affirming any such thing to have been, or a predication that it will happen again in the same manner, is received without doubt or hesitation: and our belief thus grounded, rises to assurance.

2. The next degree of probability is when, by my own experience, and the agreement of all others that mention it, a thing is found to be for the most part so; and that the particular instance of it is attested by many and undoubted witnesses. Thus history giving us such an account of men in all ages, and my own experience confirming it, that most men prefer their own private advantage to the public. If all historians that writ of Tiberius, say that he did so, it is extremely probable: and in this case, our assent rises to a degree which we call confidence.

3. In matters happening indifferently, as that a bird should fly this or that way: when any particular matter of fact comes attested by the concurrent testimony of unsuspected witnesses, there our assent is also unavoidable. Thus, that there is in Italy such a city as Rome; that about one thousand and seven hundred years ago there lived such a man in it as Julius Caesar, &c. A man can as little doubt of this, and the like, as he does of the being and actions of his own acquaintance, whereof he himself is a witness.

Probability, on these grounds, carries so much evidence with it, that it leaves as little liberty to believe or disbelieve, as demonstration does, whether we will know or be ignorant. But the difficulty is, when testimonies contradict common experience, and the reports of witnesses clash with the ordinary course of nature, or with one another. Here diligence, attention, and exactness, is required to form a right judgment; and to proportion the assent to the evidence and probability of the thing, which rises and falls, according as the two foundations of credibility favor or contradict it. These are liable to such variety of contrary observations, circumstances, reports, tempers, designs, oversights, &c. of reporters, that it is impossible to reduce to precise rules the various degrees wherein men give their assent. This in general may be said, that as the proofs, on due examination,

shall to any one appear in a greater or less degree, to preponderate on either side, so they are fitted to produce in the mind such different entertainments, as are called belief, conjecture, guess, doubt, wavering, distrust, disbelief, &c.

I think it may not be amiss to take notice of a rule observed in the law of England, which is, that though the attested copy of a record be good proof, yet the copy of a copy never so well attested, and by never so credible witnesses, will not be admitted as a proof in judicature. This practice, if it be allowable in the decisions of right and wrong, carries this observation along with it, viz. That any testimony, the farther off it is removed from the original truth, the less force it has: and in traditional truths, each remove weakens the force of the proof. There is a rule quite contrary to this, advanced by some men, who look on opinions to gain force by growing older. On this ground, propositions, evidently false or doubtful in their first beginning, come, by an inverted rule of probability, to pass for authentic truths; and those which deserved little credit from the mouths of their first relators, are thought to grow venerable by age, and are urged as undeniable.

But certain it is, that no probability can rise above its first original. What has no other evidence than the single testimony of one witness, must stand or fall by his only testimony, though afterwards cited by hundreds of others; and is so far from receiving any strength thereby, that it becomes the weaker. Because passion, interest, inadvertency; mistake of his meaning, and a thousand odd reasons, which capricious men's minds are acted by, may make one man quote another's words or meaning wrong. This is certain, that what in one age was affirmed on slight grounds, can never after come to be more valid in future ages by being often repeated.

The second sort of probability, is concerning things

not falling under the reach of our senses, and therefore not capable of testimony : and such are,

1. The existence, nature, and operations of finite immaterial beings without us, as spirits, angels, &c. or the existence of material beings, such as for their smallness or remoteness our senses cannot take notice of : as whether there be any plants, animals, &c. in the planets, and other mansions of the vast universe.

2. Concerning the manner of operation in most parts of the works of nature ; wherein, though we see the sensible effects, yet their causes are unknown, and we perceive not the ways and manner how they are produced. We see animals are generated, nourished, and move ; the loadstone draws iron, &c. : but the causes that operate, and the manner they are produced in, we can only guess, and probably conjecture. In these matters analogy is the only help we have ; and it is from that alone we draw all our grounds of probability. Thus observing, that the bare rubbing of two bodies violently on one another produces heat, and very often fire ; we have reason to think that what we call heat and fire consists in a certain violent agitation of the imperceptible minute parts of the burning matter. This sort of probability, which is the best conduct of rational experiments, and the rise of hypotheses, has also its use and influence. And a wary reasoning from analogy leads us often into the discovery of truths, and useful deductions, which would otherwise lie concealed.

Though the common experience, and the ordinary course of things, have a mighty influence on the minds of men, to make them give or refuse credit to any thing proposed to their belief ; yet there is one case wherein the strangeness of the fact lessens not the assent to a fair testimony given of it. For where such supernatural events are suitable to ends aimed at by him, who has the power to change the course of nature ; there under such circumstances they may be the fitter to

procure belief, by how much the more they are beyond, or contrary to ordinary observation. This is the proper case of miracles, which, well attested, do not only find credit themselves, but give it also to other truths.

There are propositions that challenge the highest degree of our assent on bare testimony, whether the thing proposed agree or disagree with common experience and the ordinary course of things, or no: the reason whereof is, because the testimony is of such an one, as cannot deceive nor be deceived; and that is God himself. This carries with it certainty beyond doubt, evidence beyond exception. This is called by a peculiar name, Revelation, and our assent to it, Faith; which has as much certainty in it, as our knowledge itself: and we may as well doubt of our own being, as we can, whether any revelation from God be true. So that faith is a settled and sure principle of assent and assurance, and leaves no manner of room for doubt or hesitation; only we must be sure, that it be a divine revelation, and that we understand it right; else we shall expose ourselves to all the extravagancy of enthusiasm, and all the error of wrong principles, if we have faith and assurance in what is not divine revelation.

CHAPTER XVII.

Of Reason.

The word reason, in English, has different significations; sometimes it is taken for true and clear principles; sometimes for clear and fair deductions from those principles; sometimes for the cause, and particularly for the final cause: but the consideration I shall have of it here, is, as it stands for a faculty, whereby man is supposed to be distinguished from

beasts, and wherein it is evident he much surpasses them.

Reason is necessary, both for the enlargement of our knowlege, and regulating our assent: for it hath to do both in knowlege and opinion, and is necessary and assisting to all our other intellectual faculties; and, indeed, contains two of them, viz. 1. sagacity, whereby it finds intermediate ideas; 2. illation, whereby it so orders and disposes of them, as to discover what connexion there is in each link of the chain, whereby the extremes are held together, and thereby, as it were, to draw into view the truth sought for; which is that we call illation or inference; and consists in nothing but the perception of the connexion there is between the ideas, in each step of the deduction; whereby the mind comes to see, either the certain agreement or disagreement of any two ideas, as in demonstration, in which it arrives at knowlege, or their probable connexion, on which it gives or withholds its assent, as in opinion.

Sense and intuition reach but a little way. The greatest part of our knowlege depends on deductions and intermediate ideas. In those cases where we must take propositions for true without being certain of their being so, we have need to find out, examine, and compare the grounds of their probability. In both cases, the faculty which finds out the means, and rightly applies them to discover certainty in the one, and probability in the other, is that which we call reason. So that in reason we may consider these four degrees: 1. the discovering and finding out of proofs; 2. the regular and methodical disposition of them, and laying them in such order, as their connexion may be plainly perceived; 3. the perceiving their connexion. 4. The making a right conclusion.

There is one thing more which I shall desire to be considered concerning reason,—and that is, whether

syllogism, as is generally thought, be the proper instrument of it, and the usefulest way of exercising this faculty. The causes I have to doubt of it, are these:

1. Because syllogism serves our reason but in one only of the fore-mentioned parts of it, and that is to show the connexion of the proofs of any one instance, and no more: but in this it is of no great use, since the mind can perceive such connexion, where it really is, as easily, nay, perhaps better, without it. We may observe that there are many men that reason exceeding clear and rightly, who know not how to make a syllogism: and I believe scarce any one makes syllogisms in reasoning within himself. Indeed, sometimes they may serve to discover a fallacy, hid in a rhetorical flourish; or, by stripping an absurdity of the cover of wit and good language, show it in its naked deformity. But the weakness or fallacy of such a loose discourse it shows, by the artificial form it is put into, only to those who have thoroughly studied mode and figure, and have so examined the many ways that three propositions may be put together, as to know which of them does certainly conclude right, and which not, and on what grounds it is that they do so. But they who have not so far looked into those forms, are not sure by virtue of syllogism that the conclusion certainly follows from the premises. The mind is not taught to reason by these rules; it has a native faculty to perceive the coherence or incoherence of its ideas, and can range them right, without any such perplexing repetitions.

And to show the weakness of an argument, there needs no more but to strip it of the superfluous ideas, which, blended and confounded with those on which the inference depends, seem to show a connexion where there is none, or at least do hinder the discovery of the want of it, and then to lay the naked ideas on which the force of the argumentation depends in their due order; in which position the mind taking a view

of them, sees what connexion they have, and so is able to judge of the inference without any need of syllogism at all.

2. Because syllogisms are not less liable to fallacies than the plainer ways of argumentation : and for this I appeal to common observation, which has always found these artificial methods of reasoning more adapted to catch and entangle the mind, than to instruct and inform the understanding. And if it be certain that fallacy can be couched in syllogisms, as it cannot be denied, it must be something else, and not syllogism, that must discover them. But if men skilled in, and used to syllogisms, find them assisting to their reason, in the discovery of truth, I think they ought to make use of them. All that I aim at is, that they should not ascribe more to these forms than belongs to them ; and think that men have no use, or not so full a use of their reasoning faculty without them.

But however it be in knowlege, I think it is of far less or no use at all in probabilities : for the assent there being to be determined by the preponderancy, after a due weighing of all the proofs on both sides, nothing is so unfit to assist the mind in that, as syllogism ; which running away with one assumed probability, pursues that till it has led the mind quite out of sight of the thing under consideration.

But let it help us (as perhaps may be said) in convincing men of their errors or mistakes ; yet still it fails our reason in that part, which, if not its highest perfection, is yet certainly its hardest task, and that which we most need its help in, and that is, the finding out of proofs, and making new discoveries. This way of reasoning discovers no new proofs, but is the art of marshalling and ranging the old ones we have already. A man knows first, and then he is able to prove syllogistically ; so that syllogism comes after knowlege ; and then a man has little or no need of it. But it is chiefly by the finding out those ideas that show the

connexion of distant ones, that our stock of knowledge is increased, and that useful arts and sciences are advanced.

It is fit, before I leave this subject, to take notice of one manifest mistake in the rules of syllogism, viz. that no syllogistical reasoning can be right and conclusive, but what has, at least, one general proposition in it. As if we could not reason about particulars. Whereas, in truth, the immediate object of all our reasoning is nothing but particulars. Every man's reasoning is only about the ideas existing in his own mind, which are truly, every one of them, particular existences; and our reasoning about other things, is only as they correspond with those our particular ideas.

Reason, though of a very large extent, fails us in several instances: as, 1. where our ideas fail: 2. it is often at a loss, because of the obscurity, confusion; or imperfection of the ideas it is employed about. Thus having no perfect idea of the least extension of matter, nor of infinity, we are at a loss about the divisibility of matter. 3. Our reason is often at a stand, because it perceives not those ideas which would serve to show the certain or probable agreement or disagreement of any two other ideas. 4. Our reason is often engaged in absurdities and difficulties, by proceeding on false principles, which being followed, lead men into contradictions to themselves, and inconsistency in their own thoughts. 5. Dubious words and uncertain signs often puzzle men's reason, and bring them to a nonplus.

Though the deducing one proposition from another be a great part of reason, and that which it is usually employed about; yet the principal act of ratiocination is the finding the agreement or disagreement of two ideas, one with another, by the intervention of a third. As a man, by a yard, finds two houses to be of the same length, which could not be brought to-

gether to measure their equality by juxtaposition. Words have their consequences as the signs of such ideas; and things agree, and disagree, as really they are: but we observe it only by our ideas.

In reasoning, men ordinarily use four sorts of arguments.

The first is to allege the opinions of men, whose parts, learning, eminency, power, or some other cause, has gained a name, and settled their reputation in the common esteem with some kind of authority. This may be called *argumentum ad verecundiam*.

2. Another way is, to require the adversary to admit what they allege as a proof, or to assign a better. This I call *argumentum ad ignorantiam*.

A third way, is to press a man with consequences drawn from his own principles or concessions. This is already known under the name of *argumentum ad hominem*.

4. The using of proofs drawn from any of the foundations of knowledge or probability. This I call *argumentum ad iudicium*. This alone, of all the four, brings true instruction with it, and advances us in our way to knowledge. For, 1. it argues not another man's opinion to be right, because I, out of respect, or any other consideration but that of conviction, will not contradict him. 2. It proves not another man to be in the right way, nor that I ought to take the same with him, because I know not a better. 3. Nor does it follow, that another man is in the right way, because he has shown me that I am in the wrong. This may dispose me perhaps for the reception of truth, but helps me not to it; that must come from proofs and arguments, and light arising from the nature of things themselves; not from my shamefacedness, ignorance, or error.

By what has been said of reason, we may be able to make some guess at the distinction of things, into those that are according to, above, and contrary to

reason. 1. According to reason, are such propositions, whose truth we can discover by examining and tracing those ideas we have from sensation and reflection, and by natural deduction find to be true or probable. 2. Above reason, are such propositions, whose truth or probability we cannot by reason derive from those principles. 3. Contrary to reason, are such propositions as are inconsistent with, or irreconcilable to, our clear and distinct ideas. Thus the existence of one God is according to reason: the existence of more than one God, contrary to reason: the resurrection of the body after death, above reason. Above reason may be also taken in a double sense, viz. above probability, or, above certainty. In that large sense also, contrary to reason, is, I suppose, sometimes taken.

There is another use of the word reason, wherein it is opposed to faith; which, though authorised by common use, yet is it in itself a very improper way of speaking: for faith is nothing but a firm assent of the mind; which if it be regulated as is our duty, cannot be afforded to any thing but on good reason, and so cannot be opposite to it. He that believes without having any reason for believing, may be in love with his own fancies; but neither seeks truth as he ought, nor pays the obedience due to his Maker, who would have him use those discerning faculties he has given him, to keep him out of mistake and error. But since reason and faith are by some men opposed, we will so consider them in the following chapter.

CHAPTER XVIII.

Of Faith and Reason, and their distinct Provinces.

Reason, as contradistinguished to faith, I take to be the discovery of the certainty or probability of such propositions or truths which the mind arrives at by

deductions made from such ideas, which it has got by the use of its natural faculties, viz. by sensation or reflection.

Faith, on the other side, is the assent to any proposition, on the credit of the proposer, as coming immediately from God; which we call revelation: concerning which we must observe,

1. That no man inspired by God can by any revelation communicate to others any new simple ideas, which they had not before from sensation or reflection: because words, by their immediate operation on us, cannot cause other ideas, but of their natural sounds, and as signs of latent ideas they can only recall to our thoughts those ideas, which to us they have been wont to be signs of; but cannot introduce any new, and formerly unknown simple ideas. The same holds in all other signs, which cannot signify to us things, of which we have never before had any idea at all. For our simple ideas we must depend wholly on our natural faculties, and can by no means receive them from traditional revelation; I say traditional, in distinction to original revelation. By the one, I mean that impression which is made immediately by God on the mind of any man, to which we cannot set any bounds. And by the other, those impressions delivered over to others in words, and the ordinary ways of conveying our conceptions one to another.

2. I say, that the same truths may be discovered by revelation which are discoverable to us by reason; but in such there is little need or use of revelation; God having furnished us with natural means to arrive at the knowledge of them: and truths discovered by our natural faculties are more certain than when conveyed to us by traditional revelation. For the knowledge we have, that this revelation came at first from God, can never be so sure as the knowledge we have from the clear and distinct perception of the agreement and disagreement of our own ideas. This also

holds in matters of fact, knowable by our senses : as the history of the deluge is conveyed to us by writings, which had their original from revelation ; and yet nobody, I think, will say he has as certain and clear knowlege of the flood, as Noah that saw it, or that he himself would have had, had he then been alive and seen it. For he has no greater assurance than that of his senses, that it is writ in the book, supposed to be writ by Moses inspired. But he has not so great an assurance that Moses writ that book, as if he had seen Moses write it ; so that the assurance of its being a revelation is still less than the assurance of his senses.

Revelation cannot be admitted against the clear evidence of reason. For since no evidence of our faculties, by which we receive such a revelation, can exceed, if equal, the certainty of our intuitive knowlege ; we can never receive for a truth any thing that is directly contrary to our clear and distinct knowlege. Thus the ideas of one body and one place do so clearly agree, that we can never assent to a proposition that affirms the same body to be in two distinct places at once, however it should pretend to the authority of a divine revelation : since the evidence, 1. that we deceive not ourselves in ascribing it to God, 2. that we understand it right, can never be so great as the evidence of our own intuitive knowlege, whereby we discern it impossible for the same body to be in two places at once.

In propositions, therefore, contrary to our distinct and clear ideas, it will be in vain to urge them as matters of faith. For faith can never convince us of any thing that contradicts our knowlege ; because, though faith be founded on the testimony of God, who cannot lie, yet we cannot have an assurance of the truth of its being a divine revelation, greater than our knowlege. For if the mind of man can never have a clearer evidence of any thing to be a divine revelation, than it has of the principles of its own rea-

son ; it can never have a ground to quit the clear evidence of its reason, to give place to a proposition, whose revelation has not a greater evidence than those principles have.

In all things therefore where we have clear evidence from our ideas, and the principles of knowledge above mentioned, reason is the proper judge ; and revelation cannot in such cases invalidate its decrees ; nor can we be obliged, where we have the clear and evident sentence of reason, to quit it for the contrary opinion, under a pretence that it is matter of faith, which can have no authority against the plain and clear dictates of reason. But,

3. There being many things of which we have but imperfect notions, or none at all ; and other things, of whose past, present, or future existence, by the natural use of our faculties, we can have no knowledge at all ; these, being beyond the discovery of our faculties, and above reason, when revealed, become the proper matter of faith. Thus, that part of the angels rebelled against God ; that the bodies of men shall rise and live again, and the like, are purely matters of faith, with which reason has directly nothing to do.

1. Then, whatever proposition is revealed, of whose truth our mind by its natural faculties and notions cannot judge, that is purely matter of faith, and above reason.

2. All propositions, whereof the mind by its natural faculties can come to determine and judge from natural acquired ideas, are matter of reason ; but with this difference,—that in those concerning which it has but an uncertain evidence, and so is persuaded of their truth only on probable grounds,—in such, I say, an evident revelation ought to determine our assent even against probability. Because the mind, not being certain of the truth of that it does not evidently know, is bound to give up its assent to such a testimony, which it is satisfied comes from one who can-

not err, and will not deceive. But yet it still belongs to reason to judge of the truth of its being a revelation, and of the signification of the words wherein it is delivered.

Thus far the dominion of faith reaches; and that without any violence to reason, which is not injured or disturbed, but assisted and improved by new discoveries of truth, coming from the eternal Fountain of all knowlege. Whatever God hath revealed is certainly true; no doubt can be made of it. This is the proper object of faith: but whether it be a divine revelation or no, reason must judge; which can never permit the mind to reject a greater evidence to embrace what is less evident, nor prefer less certainty to the greater. There can be no evidence that any traditional revelation is of divine original, in the words we receive it, and the sense we understand it, so clear and so certain, as that of the principles of reason: and therefore, nothing that is contrary to the clear and self-evident dictates of reason, has a right to be urged or assented to, as a matter of faith, wherein reason has nothing to do. Whatsoever is divine revelation, ought to overrule all our opinions, prejudices, and interests, and hath a right to be received with a full assent. Such a submission as this, of our reason to faith, takes not away the landmarks of knowlege: this shakes not the foundations of reason, but leaves us that use of our faculties for which they were given us.

CHAPTER XIX.

Of Enthusiasm.

He that would seriously set on the search of truth, ought in the first place to prepare his mind with a love of it. For he that loves it not, will not take much pains to get it, nor be much concerned when he misses it. There is nobody who does not profess himself a

lover of truth, and that would not take it amiss to be thought otherwise of. And yet for all this, one may truly say, there are very few lovers of truth for truth's sake, even amongst those who persuade themselves that they are so. How a man may know whether he be so in earnest, is worth inquiry: and I think there is this one unerring mark of it, viz. the not entertaining any proposition with greater assurance than the proofs it is built on will warrant. Whoever goes beyond this measure of assent, it is plain, receives not truth in the love of it. For the evidence that any proposition is true (except such as are self-evident) lying only in the proofs a man has of it, whatever degrees of assent he affords it beyond the degrees of that evidence, it is plain all that surplusage of assurance is owing to some other affection, and not to the love of truth. Whatsoever credit we give to any proposition more than it receives from the principles and proofs it supports itself on, is owing to our inclinations that way, and is so far a derogation from the love of truth as such: which, as it can receive no evidence from our passions or interests, so it should receive no tincture from them.

The assuming an authority of dictating to others, and a forwardness to prescribe to their opinions, is a constant concomitant of this bias and corruption of our judgments. For how can it be otherwise, but that he should be ready to impose on others' belief, who has already imposed on his own?

On this occasion I shall consider a third ground of assent, which with some men has the same authority as either faith or reason, I mean enthusiasm; which, laying by reason, would set up revelation without it; whereby in effect it takes away both reason and revelation, and substitutes in the room of it the ungrounded fancies of a man's own brain, and assumes them for a foundation both of opinion and conduct.

Immediate revelation being a much easier way for

men to establish their opinions, and regulate their conduct, than the tedious labor of strict reasoning, it is no wonder that some have been very apt to pretend to it, especially in such of their actions and opinions as they cannot account for by the ordinary methods of knowledge, and principles of reason. Hence we see that in all ages, men, in whom melancholy has mixed with devotion, or whose conceit of themselves has raised them into an opinion of greater familiarity with God than is allowed others, have often flattered themselves with a persuasion of an immediate intercourse with the Deity, and frequent communications from the divine Spirit.

Their minds being thus prepared, whatever groundless opinion comes to settle itself strongly on their fancies, is an illumination from the Spirit of God; and whatsoever odd action they find in themselves a strong inclination to do, that impulse is concluded to be a call or direction from Heaven, and must be obeyed. This I take to be properly enthusiasm, which, though rising from the conceit of a warmed or overweening brain, works, where it once gets footing, more powerfully on the persuasions and actions of men, than either reason or revelation, or both together; men being most forwardly obedient to the impulses they receive from themselves. Strong conceit, like a new principle, carries all easily with it, when, got above common sense, and freed from all restraint of reason, and check of reflection, it is heightened into a divine authority, in concurrence with our own temper and inclination.

When men are once got into this way of immediate revelation, of illumination without search, and of certainty without proof, it is a hard matter to get them out of it. Reason is lost on them; they are above it: they see the light infused into their understandings, and cannot be mistaken; it is clear and visible there, like the light of bright sunshine, shows itself, and needs no other proof but its own evidence: they feel

the hand of God moving them within, and the impulses of the Spirit, and cannot be mistaken in what they feel.

This is the way of talking of these men : they are sure because they are sure ; and their persuasions are right, only because they are strong in them. For when what they say is stripped of the metaphor of seeing and feeling, this is all it amounts to. These men have, they say, clear light, and they see ; they have an awakened sense, and they feel : this cannot, they are sure, be disputed them. But here let me ask : this seeing, is it the perception of the truth of the proposition, or of this, that it is a revelation from God ? This feeling, is it a perception of an inclination to do something, or of the Spirit of God moving that inclination ? These are two very different perceptions, and must be carefully distinguished. I may perceive the truth of a proposition, and yet not perceive that it is an immediate revelation from God. Nay, I may perceive I came not by it in a natural way, without perceiving that it is a revelation from God. Because there be spirits, which, without being divinely commissioned, may excite those ideas in me, and make their connexion perceived. So that the knowledge of any proposition coming into my mind, I know not how, is not a perception that it is from God. But however it be called light and seeing ; I suppose it is at most but belief and assurance. For where a proposition is known to be true, revelation is needless. If therefore it be a proposition which they are persuaded, but do not know to be true, it is not seeing but believing. What I see, I know to be so by the evidence of the thing itself : what I believe, I take to be so on the testimony of another : but this testimony I must know to be given, or else what ground have I of believing ? I must see that it is God that reveals

this to me, or else I see nothing. If I know not this, how great soever my assurance is, it is groundless: whatever light I pretend to, it is but enthusiasm.

In all that is of divine revelation, there is need of no other proof, but that it is from God: for he can neither deceive nor be deceived. But how shall it be known that any proposition in our minds is a truth revealed to us by God? Here it is that enthusiasm fails of the evidence it pretends to. For men thus possessed boast of a light, whereby they say they are brought into the knowledge of this or that truth. But if they know it to be a truth, they must know it to be so either by its own self-evidence or by the rational proofs that make it out to be so. If they know it to be a truth either of these two ways, they in vain suppose it to be a revelation. For thus all truths, of what kind soever, that men uninspired are enlightened with, come into their minds. If they say they know it to be true, because it is a revelation from God, the reason is good: but then it will be demanded, how they know it to be a revelation from God? If they say by the light it brings with it, I beseech them to consider whether this be any more, than that it is a revelation because they strongly believe it to be true. For all the light they speak of, is but a strong persuasion of their own minds that it is a truth, which is a very unsafe ground to proceed on, either in our tenets or actions.

True light in the mind is nothing else but the evidence of the truth of any proposition: and if it be not self-evident, all the light it can have is from clearness of those proofs on which it is received. To talk of any other light in the understanding, is to put ourselves in the dark, or in the power of the prince of darkness. For if strength of persuasion be the light which must guide us, how shall any one distinguish between the delusions of Satan, and the inspirations of the Holy Ghost?

He therefore that will not give up himself to delusion and error, must bring this guide of his light within to the trial. God, when he makes the prophet, does not unmake the man. He leaves his faculties in their natural state, to enable him to judge of his inspirations, whether they be of divine original or no. If he would have us assent to the truth of any proposition, he either evidences that truth by the usual methods of natural reason, or else makes it known to be a truth which he would have us assent to by his authority; and convinces us that it is from him, by some marks which reason cannot be mistaken in. Reason must be our last judge and guide in every thing. I do not mean that we must consult reason, and examine whether a proposition revealed from God can be made out by natural principles, and if it cannot, that then we may reject it: but consult it we must, and by it examine, whether it be a revelation from God or no: and if reason finds it to be revealed from God, reason then declares for it, as much as for any other truth, and makes it one of her dictates. Every conceit that thoroughly warms our fancies must pass for an inspiration, if there be nothing but the strength of our persuasions whereby to judge of them: if reason must not examine their truth by something extrinsical to the persuasions themselves, inspirations and delusions, truth and falsehood, will have the same measure, and will not be possible to be distinguished.

Thus we see the holy men of God, who had revelations from God, had something else besides that internal light of assurance in their own minds, to testify to them that it was from God. They had outward signs to convince them of the Author of those revelations. And when they were to convince others, they had a power given them to justify the truth of their commission from Heaven; and by visible signs to assert the divine authority of the message they were sent with. Moses saw the bush burn without being consumed, and heard a

voice out of it. God, by another miracle of his rod turned into a serpent, assured him likewise of a power to testify his mission, by the same miracle repeated before them to whom he was sent. This, and the like instances to be found among the prophets of old, are enough to show that they thought not an inward seeing, or persuasion of their own minds, a sufficient evidence, without any other proof, that it was from God, though the Scripture does not every where mention their demanding or having such proofs.

I do not deny that God can, or doth sometimes enlighten men's minds in the apprehending of certain truths, or excite them to good actions by the immediate influence and assistance of the Holy Spirit, without any extraordinary signs accompanying it. But in such cases too we have reason and the Scripture, unerring rules, to know whether it be from God, or no. Where the truth embraced is consonant to the revelation in the written word of God, or the action conformable to the dictates of right reason, or holy writ, we run no risk in entertaining it as such; because, though perhaps it be not an immediate revelation from God, extraordinarily operating on our minds, yet we are sure it is warranted by that revelation which he has given us of truth. Where right reason or Scripture is express for any opinion or action, we may receive it as of divine authority; but it is not the strength of our own persuasions which can by itself give it that stamp. The bent of our own minds may favor it as much as we please; that may show it to be a fondling of our own, but will by no means prove it to be an offspring of heaven and of divine original.

CHAPTER XX.

Of wrong Assent or Error.

Error is a mistake of our judgment, giving assent to that which is not true. The reasons whereof may

be reduced to these four : 1. want of proofs ; 2. want of ability to use them ; 3. want of will to use them ; 4. wrong measures of probability.

1. Want of proofs : by which, I do not mean only the want of those proofs which are not to be had, but also of those proofs which are in being, or might be procured. The greatest part of mankind want the conveniences and opportunities of making experiments and observations themselves, or of collecting the testimonies of others, being enslaved to the necessity of their mean condition, whose lives are worn out only in the provisions for living. These men are, by the constitution of human affairs, unavoidably given over to invincible ignorance of those proofs, on which others build, and which are necessary to establish those opinions ; for, having much to do to get the means of living, they are not in a condition to look after those of learned and laborious inquiries.

It is true that God has furnished men with faculties sufficient to direct them in the way they should take, if they will but seriously employ them that way, when their ordinary vocations allow them leisure. No man is so wholly taken up with the attendance on the means of living, as to have no spare time at all to think on his soul, and inform himself in matters of religion, were men as intent on this, as they are on things of lower concernment. There are none so enslaved to the necessity of life, who might not find many vacancies that might be husbanded to this advantage of their knowlege.

Besides those already mentioned, there are others, whose largeness of fortune would plentifully enough supply books and other requisites for discovering of truth, but they are cooped in close by the laws of their countries, and the strict guards of those whose interest it is to keep them ignorant, lest, knowing more, they should believe the less in them. This is generally the case of all those who live in places where

care is taken to propagate truth without knowlege, and more are forced, at a venture, to be of the religion of their country, and must therefore swallow down opinions, as silly people do empirics' pills, without knowing what they are made of, or how they will work.

2. Want of ability to use them. There be many who cannot carry a train of consequences in their heads, nor weigh exactly the preponderancy of contrary proofs and testimonies. These cannot discern that side on which the strongest proofs lie ; nor follow that which in itself is the most probable opinion. It is certain, that there is a wide difference in men's understandings, apprehensions, and reasonings, to a very great latitude, so that one may, without doing injury to mankind, affirm, that there is a greater distance between some men and others, in this respect, than between some men and some beasts : but how this comes about is a speculation, though of great consequence, yet not necessary to our present purpose.

3. For want of will to use them. Some, though they have opportunities and leisure enough, and want neither parts nor learning, nor other helps, are yet never the better for them, and never come to the knowlege of several truths that lie within their reach ; either on the account of their hot pursuit of pleasure, constant drudgery in business, laziness and oscitancy in general, or a particular aversion for books and study ; and some out of fear that an impartial inquiry would not favor those opinions which best suit their prejudices, lives, designs, interests, &c., as many men forbear to cast up their accounts, who have reason to fear that their affairs are in no very good posture.

How men, whose plentiful fortunes allow them leisure to improve their understandings, can satisfy themselves with a lazy ignorance, I cannot tell : but methinks they have a low opinion of their souls, who

lay out all their incomes in provisions for the body, and employ none of it to procure the means and helps of knowledge. I will not here mention how unreasonable this is for men that ever think of a future state, and their concernment in it, which no rational man can avoid to do sometimes; nor shall I take notice what a shame it is to the greatest contemners of knowledge, to be found ignorant in things they are concerned to know. But this, at least, is worth the consideration of those who call themselves gentlemen; that however they may think credit, respect, and authority, the concomitants of their birth and fortune; yet they will find all these still carried away from them by men of lower condition, who surpass them in knowledge. They who are blind, will always be led by those that see, or else fall into the ditch: and he is certainly the most subjected, the most enslaved, who is so in his understanding.

4. Wrong measures of probability; which are,

1. Propositions that are not in themselves certain and evident, but doubtful and false, taken for principles. Propositions looked on as principles, have so great an influence on our opinions, that it is usually by them we judge of truth, and what is inconsistent with them is so far from passing for probable with us, that it will not be allowed possible. The reverence borne to these principles is so great, that the testimony, not only of other men, but the evidence of our own senses is often rejected, when they offer to vouch any thing contrary to these established rules. The great obstinacy that is to be found in men, firmly believing quite contrary opinions, though many times equally absurd, in the various religions of mankind, are as evident a proof, as they are an unavoidable consequence of this way of reasoning from received traditional principles: so that men will disbelieve their own eyes, renounce the evidence of their senses,

and give their own experience the lie, rather than admit of any thing disagreeing with these sacred tenets.

2. *Received hypotheses.* The difference between these and the former is, that those who proceed by these, will admit of matter of fact, and agree with dissenters in that, but differ in assigning of reasons, and explaining the manner of operation. These are not at that open defiance with their senses as the former: they can endure to hearken to their information a little more patiently; but will by no means admit of their reports in the explanation of things; nor be prevailed on by probabilities, which would convince them, that things are not brought about just after the same manner that they have decreed within themselves that they are.

3. *Predominant passions or inclinations.* Let never so much probability hang on one side of a covetous man's reasoning, and money on the other, it is easy to foresee which will prevail. Though men cannot always openly gainsay, or resist the force of manifest probabilities, that make against them, yet yield they not to the argument. Not but that it is the nature of the understanding, constantly to close with the more probable side: but yet a man hath power to suspend and restrain its inquiries, and not permit a full and satisfactory examination. Until that be done, there will be always these two ways left of evading the most apparent probabilities.

1. That the arguments being brought in words, there may be fallacy latent in them; and the consequences being perhaps many in train, may be some of them incoherent. There are few discourses so short and clear, to which men may not, with satisfaction enough to themselves, raise this doubt, and from whose conviction they may not without reproach of dissingenuity or unreasonableness set themselves free.

2. Manifest probabilities may be evaded on this suggestion, that I know not yet all that may be said on the contrary side; and therefore, though a man be beaten, it is not necessary he should yield, not knowing what forces there are in reserve behind. This is a refuge against conviction, so open and so wide, that it is hard to determine when a man is quite out of the verge of it. But yet there is some end of it; and a man having carefully inquired into all the grounds of probability, may in most cases come to acknowledge, on the whole matter, on which side the probability rests: wherein the proofs are so cogent and clear, as to make the fact attested highly probable; neither is there sufficient ground to suspect that there is either fallacy of words, nor equally valid proofs, yet undiscovered, latent on the other side: nor, lastly, can there be any supposition that there is as fair testimony against, as for the matter of fact attested. In all such cases, I think it is not in any rational man's power to refuse his assent; in other less clear cases, I think it is in a man's power to suspend his assent; and, perhaps, content himself with the proofs he has, if they favor the opinion that suits with his inclination or interest, and so stop from farther search. But that a man should afford his assent to that side, on which the less probability appears to him, seems to me utterly impracticable, and as impossible, as it is to believe the same thing probable and improbable at the same time.

4. Authority, or the giving up our assent to the common received opinions, either of our friends or party, neighborhood or country. How many men have no other ground for their tenets, than the supposed honesty or learning, or number of those of the same profession? as if honest or bookish men could not err; or truth were to be established by the vote of the multitude. Yet this with most men serves the

turn. All men are liable to error, and most men are in many points by passion or interest under temptation to it. This is certain, that there is not an opinion so absurd, which a man may not receive on this ground. There is no error to be named, which has not had its professors. And a man shall never want crooked paths to walk in, if he thinks that he is in the right way, wherever he has the footsteps of others to follow.

But, notwithstanding the great noise that is made in the world about errors and opinions, I must do mankind that right as to say, there are not so many men in errors and wrong opinions as is commonly supposed: not that I think they embrace the truth, but indeed, because, concerning those doctrines they keep such a stir about, they have no thought, no opinion at all. For if any one should a little catechise the greatest part of the partisans of most of the sects in the world, he would not find, concerning those matters they are so zealous for, that they have any opinions of their own: much less would he have reason to think, that they took them on the examination of arguments, and appearance of probability. They are resolved to stick to a party, that education or interest has engaged them in; and there, like the common soldiers of an army, show their courage and warmth, as their leaders direct, without ever examining, or so much as knowing the cause they contend for.

CHAPTER XXI.

Of the Division of the Sciences.

All that can fall within the compass of human understanding, being either, 1. the nature of things, their relations, and their manner of operation; or, 2. that which man himself ought to do as a rational and voluntary agent, for the attainment of any end, especially happiness; or, 3. the ways and means whereby

the knowlege of both of these are attained and communicated; I think science may be properly divided into these three sorts.

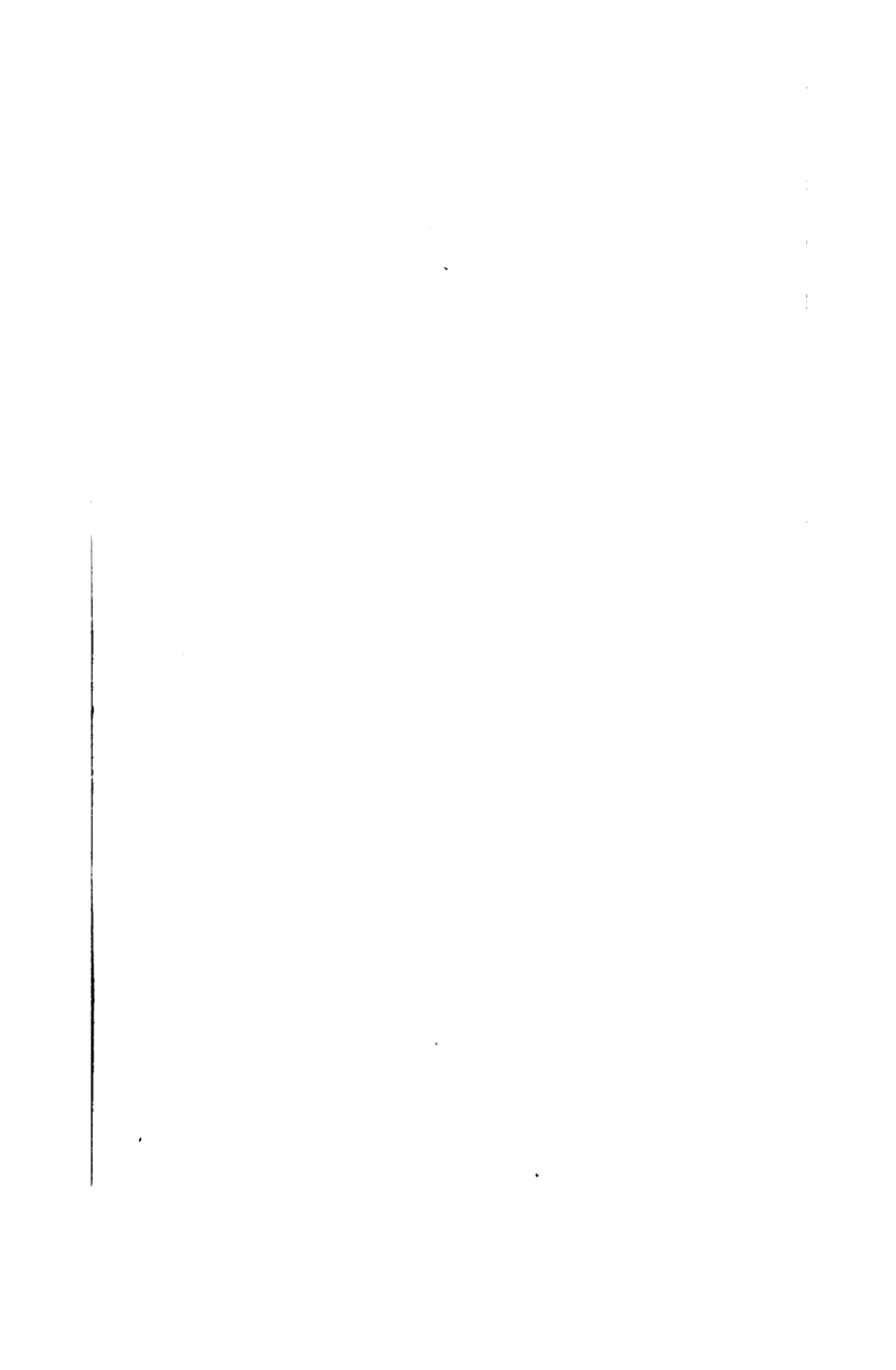
1. The knowlege of things, their constitutions, properties, and operations, whether material or immaterial: this, in a little more enlarged sense of the word, I call *φυσική*, or natural philosophy. The end of this is bare speculative truth; and whatsoever can afford the mind of man any such, falls under this branch, whether it be God himself, angels, spirits, bodies, or any of their affections, as number, figure, &c.

2. *Πρακτική*, the skill of right applying our own powers and actions for the attainment of things good and useful. The most considerable under this head is ethics, which is the seeking out those rules and measures of human actions, which lead to happiness, and the means to practise them. The end of this is not bare speculation; but right, and a conduct suitable thereto.

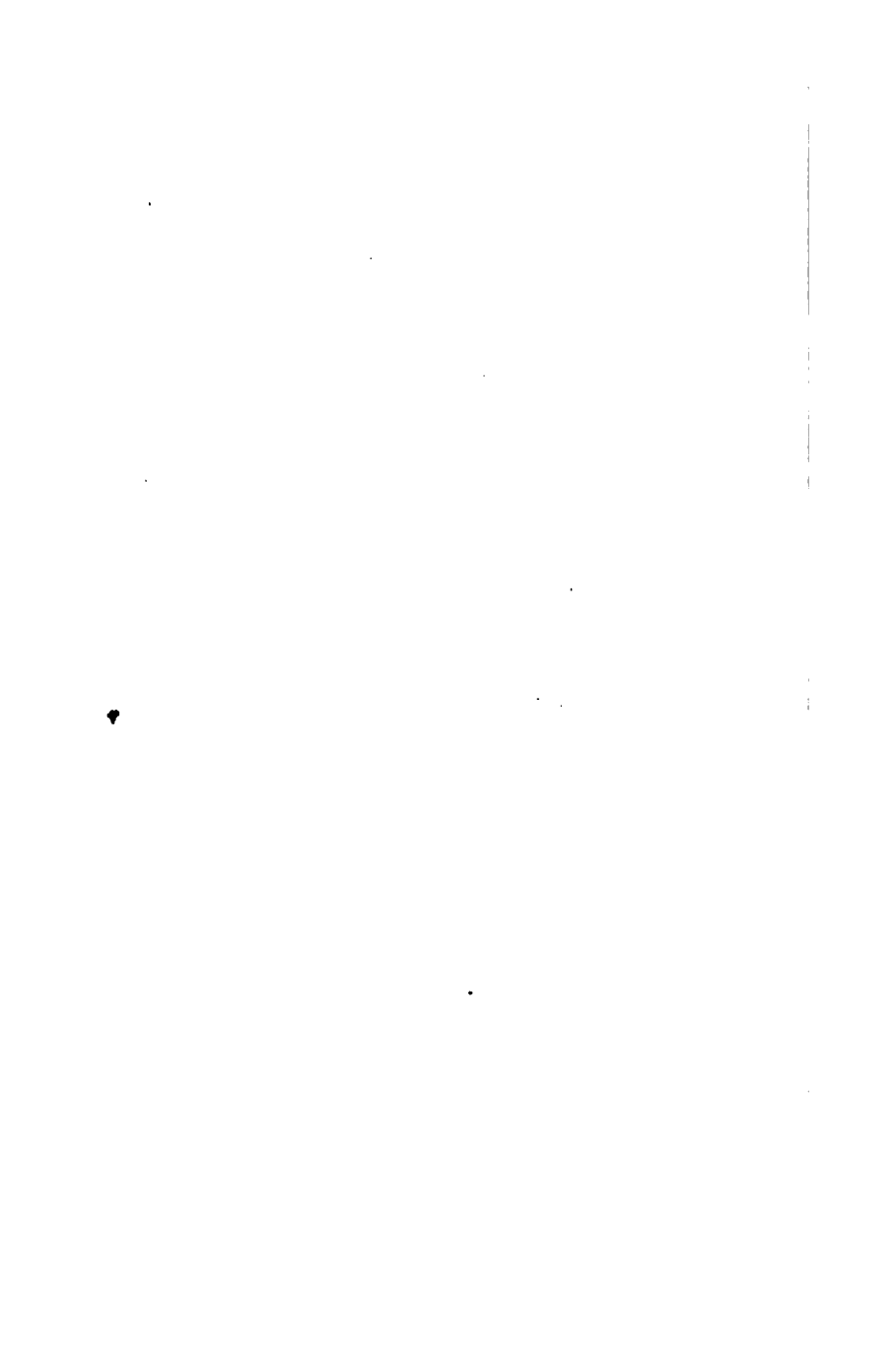
3. *Σημειωτική*, or the doctrine of signs: the most usual being words, it is aptly enough termed logic: the business whereof is to consider the nature of signs, which the mind makes use of for the understanding of things, or conveying its knowlege to others. Things are represented to the mind by ideas; and men's ideas are communicated to one another by articulate sounds, or words. The consideration then of ideas and words, as the great instruments of knowlege, makes no despicable part of their contemplation, who would take a view of human knowlege in the whole extent of it.

This seems to me the first and most general, as well as natural division of the objects of our understanding. For a man can employ his thoughts about nothing, but either the contemplation of things themselves for the discovery of truth, or about the things in his own power, which are his actions, for the attainment of his own ends; or the signs the mind makes use of, both in

the one and the other, and the right ordering of them, for its clearer information. All which three—viz. Things as they are in themselves knowable; Actions, as they depend on us in order to happiness; and the right use of Signs, in order to knowlege—being *toto cælo* different, they seemed to me to be the three great provinces of the intellectual world wholly separate and distinct one from another.



CONDUCT
OF
THE UNDERSTANDING.



CONDUCT

OF

THE UNDERSTANDING.

I. INTRODUCTION.—THE last resort of a man in the conduct of himself is his understanding; for though we distinguish the faculties of the mind, and give the supreme command to the will, as to an agent; yet in truth the man, as the agent, determines himself to this or that voluntary action, on some precedent knowlege, or appearance of knowlege, in the understanding; to whose dictates the will itself, how uncontrollable soever it may be thought to be, never fails in its obedience. Hence great care should be taken of the understanding, to conduct it right in the search of knowlege, and in the judgments it makes.

PARTS.—In men's understandings their natural constitutions put so wide a difference, that art and industry never are able to master it; even amongst men of equal education there is a great inequality of parts. Yet were all equal, still most men I imagine come very short of what they might attain did they not neglect their understandings. A few rules of logic are thought sufficient for those who pretend to the highest improvement; whereas I think there are not only many natural defects in the understanding overlooked which are capable of amendment, but also many faults in

the exercise of it, which keep them in ignorance. I shall endeavor to point out the proper remedies.

REASONING.—Besides the want of determined ideas, and of sagacity in finding out intermediate ideas, there are three miscarriages that men are guilty of in reference to their reason.

1. The first is of those, who seldom reason at all, but do and think according to the example of others.

2. The second is of those, who put passion in the place of reason, and being resolved that that shall govern their actions and arguments, neither use their own, nor hearken to other people's reason, any farther than it suits their humor, and are therefore content to use words, which carry no distinct ideas to their mind.

3. The third sort is of those, who sincerely follow reason, but for want of an enlarged sense, have not a full view of all that relates to the question, and may be of moment to decide it. Indeed very few of us see but one side of the matter. Hence as we know but in part, it is no wonder we conclude not right from our partial views; and hence too the utility of consulting with others, even of less capacity, quickness, and penetration than oneself; for since no one sees all, it is beneath no man to try, whether another may not have notions of things which have escaped himself, and which his reason would make use of if they came into his mind. The faculty of reasoning never deceives those who trust to it; the consequences from what it builds on are certain; but that which misleads us is, that the principles on which we bottom our reasoning are but a part of what should go into the reckoning to make it exact.

Hence it is that men who reason right, make no great advances in their discoveries of truth. Conversing but with one sort of men, and reading but one sort of books, they come not into the hearing but of one sort of notions. Content to canton out to themselves a little Goshen in the intellectual world, where alone

the light shines, they give up the rest of the vast expanse of thought to night and darkness, and so avoid coming near it. They have a petty traffic with known correspondents in some little creek ; within that they confine themselves ; and, dexterous managers of the wares and products of that corner, will not venture out into the great ocean of knowledge, to survey the riches, no less genuine, solid, and useful, that nature hath stored other parts with. Such persons, so separated from the notions, discourses, and attainments of the rest of mankind, may not be inaptly compared to the inhabitants of the Marian islands ; who, removed from all communion with the habitable parts of the earth, thought themselves the only people of the world ; and even after the Spaniards had brought amongst them the notice of variety of nations abounding in sciences, arts, and conveniences of life, of which they knew nothing, looked on themselves as the happiest and wisest people in the universe. But for all that, nobody, I think, will imagine them to be deep naturalists, or solid metaphysicians, or to possess enlarged views in ethics or politics. Let not men, therefore, desirous to have a sight of truth in its full extent, narrow their prospect, or think there is no truth but in the sciences they study, or the books they read. To prejudge other men's notions before we have looked into them, is not to show their darkness, but to put out our own eyes. *Try all things, hold fast that which is good*, is a rule coming from the Father of all wisdom : and it is hard to know what other way men can come at truth, if they do not search for it as for gold. True it is that he who digs for it, must meet with much rubbish before he gets at the pure metal : but the gold is still gold, and will enrich the man that so employs his pains to seek it. Neither is there any danger he should be deceived by the dross with which it is mixed ; since he carries about him a touchstone, if he will make use of it, to distinguish gold from glitter-

ing, truth from appearances. But this touchstone, which is natural reason, is spoiled by prejudice, presumption, and the want of exercising it to the fullest extent. Trace it, and see whether it be not so. The villager has commonly but little knowledge, because his ideas have been confined to the narrow bounds of his employment: the mechanic of a country town outdoes him: and cobblers of great cities surpass both. On the other hand, a country gentleman, who, leaving his learning in the university, removes to his mansion-house, and associates with neighbors who relish nothing but hunting and a bottle, and whose discourse goes not beyond what claret and dissoluteness inspire; such a patriot, formed in this happy way of improvement, cannot fail to give notable decisions on the bench of quarter-sessions, and eminent proofs of his skill in politics, when the strength of his purse and party have advanced him to a more conspicuous station. Yet to such a one an ordinary coffee-house gleaner of the city is a thorough statesman, and as much superior to, as a man conversant about Whitehall and the court is to an ordinary shopkeeper. To carry this a little farther. Here is one muffled up in the infallibility of his own sect, who will not touch a book, or enter into debate with a person that will question any of those things which to him are sacred. Another surveys our differences in religion with an equitable indifference, and so finds that none of them are in every thing unexceptionable. These systems, he says, were made by men, and carry the mark of fallible man in them; and in those whom he differs from, and till he opened his eyes had a general prejudice against, he meets with more to be said for a great many things than before he was aware of, or could have imagined. Which of these two is most likely to arrive at truth, the mark all aim at in religious controversies? In all these instances the parties differ only as to the different scope that has been given to their understandings to range

in, for furnishing their heads with ideas, whereon to employ their minds.

It will possibly be objected, Who is sufficient for all this? I answer, more than can be imagined. Every one knows what his proper business is, and what he can make of himself, if he will not deprive himself, by a narrowness of spirit, of those helps that chance throws in his way. I do not say, that to be a good geographer a man should actually survey the whole earth. Yet every one must allow that he will know the country better, who traverses it up and down, than he who keeps within the narrow bounds of a field or two that delight him. He that will inquire out the best books in each science, will not find it an infinite work to acquaint himself with the sentiments of mankind concerning the most weighty and comprehensive subjects; nor with a mind strengthened, capacity enlarged, and faculties improved, will he miss giving proof of a clear head, and a comprehensive knowledge. Only he that would thus send abroad his inquiries after truth, must settle in his head determined ideas of all that he employs his thoughts about, and never fail to judge unbiassedly of all that he receives from others. Reverence or prejudice must not be suffered to give beauty or deformity to any of their opinions.

OF PRACTICE AND HABITS.—We are born with faculties capable almost of any thing; but it is only the exercise of them which leads us towards the perfection of skill.

A middle-aged ploughman will scarce ever be brought to the carriage of a gentleman, though his body be as well proportioned, and his joints as supple, and his natural parts not any way inferior. The legs of a dancing-master, and the fingers of a musician, fall as it were naturally into regular and admirable motions. Bid them change their parts, and they will in vain endeavor to produce like motions in the members

not used to them. What incredible and astonishing movements do we find rope-dancers and tumblers bring their bodies to ! Yet all these are nothing but the mere effects of practice in men, whose bodies have nothing different from those of the amazed spectators.

So it is with the mind. Practice makes it what it is : and most even of those excellences which are looked on as natural endowments, will be found, when examined more narrowly, to be the result of repeated exercise. Some men are remarked for raillery ; others for diverting stories. This is apt to be taken for the effect of pure nature, because it is not got by rules, nor learnt as an art. But yet it is true that at first some lucky hit, which took with somebody, and gained him commendation, encouraged him to try again, till at last he got a facility in it without perceiving how ; and that is attributed to nature, which was the effect of practice merely. I do not deny that natural disposition may often give the first rise to it ; but that never carries a man without practice to perfection.

Since then the difference so observable in men's understandings does not arise so much from the natural faculties as acquired habits, it is in vain to endeavor to make a man of fifty reason well, or speak handsomely, who has never been used to it, though you should lay before him a collection of all the best precepts of logic or oratory. Nobody is made any thing by hearing or remembering rules alone. Practice must settle the habit of doing, without reflecting on the rule.

Hence as weakness in men's understandings comes from want of a right use of their own minds, I am apt to think the fault is mislaid on nature ; the real fault is not in the want of parts, but in the want of a due improvement of them. Thus men, sharp enough in making a bargain, appear, if you reason with them about matters of religion, perfectly stupid.

IDEAS.—In what relates to the right conduct of the

understanding, we must not fail to get determined ideas, and employ our thoughts about them, rather than about sounds put for them ; and settle the signification of words which we use with ourselves, or others, in the search of truth.

PRINCIPLES.—Men often fall into the custom of taking up with principles that are not self-evident, and very often not so much as true ; and are wont to rest their opinions on foundations that have no more certainty nor solidity than the propositions built on them, and embraced for their sake. Such foundations are these and the like, viz. the founders or leaders of my party are good men, and therefore their tenets are true ; it is the opinion of a sect that is erroneous, therefore it is false : it hath been long received in the world, therefore it is true ; or, it is new, and therefore false.

These, and many the like, by no means the measures of truth and falsehood, the generality of men make the standards ; and thus determining truth and falsehood by wrong measures, embrace error for certainty, and become positive in things they have no ground for.

No one who pretends to the least reason but must acknowledge, when any of these false maxims are brought to the test, that they are fallible, and such as he will not allow in those that differ from him ; and yet, on the very next occasion that offers, he will argue again on the same grounds. Would one not be ready to think that men are willing to impose on themselves by wrong measures, even after they see they cannot be relied on ? But yet many who argue thus are in earnest, and do it not to impose on themselves or others. They are persuaded of what they say, and think there is weight in it, though in a like case they have been convinced there is none. But such is our nature, that the mind must have some foundation, true or false, to rest itself on, otherwise it feels unquiet and unsettled. Hence it appears that our very tempers dispose us to a right use of our under-

standings, if we would follow as we should the inclinations of our nature.

In matters of religion, men are not permitted to be always wavering; they must embrace some tenets or other; and it would be a shame for a man to pretend seriously to be persuaded of the truth of any religion, and yet not be able to give any reason for his preference of this to any other opinion; and therefore they must make use of some principles or other, and those can be no other than such as they have and can manage; and to say they are not in earnest persuaded by them, is contrary to experience, and to allege that they are not misled when we complain they are.

If this be so, it will be urged, Why then do they not rather make use of unquestionable principles, rather than such as may deceive them, and serve to support error as well as truth?

I answer, they do not make use of surer principles, because they cannot. But this inability proceeds not from want of natural parts (for those few whose case that is are to be excused), but for want of the use of reason. Few men are from their youth accustomed to strict reasoning, and to trace the dependence of any truth in a long train of consequences to its remote principles, and to observe its connexion; and he that by frequent practice has not been used to this employment of his understanding, is no more able, when he is grown into years, to bring his mind to it, than he is on a sudden able to grave or design, dance on the ropes, or write a good hand, who has never practised any of those arts.

Nay, the most of men are so wholly strangers to this use of reason, that they do not so much as perceive their want of it; they despatch the ordinary business of their callings by rote; and if at any time they miss success, they impute it to any thing rather than want of thought or skill; that they conclude (because they know no better) they have in perfec-

tion ; since a want of understanding is what nobody discovers or complains of in himself. Thus content with this imperfect use of his understanding, he never troubles himself to seek out methods of improving his mind, and lives all his life without any notion of close reasoning, such as is requisite for the making out the speculative truths which most men profess to believe, and are most concerned in. What then can be expected from men that neither see the want of any reasoning, nor, if they do, know they how to set about it, or could perform it ? You may as well set a country-man, who scarce knows the figures, and never cast up a sum, to find the true balance of a merchant's long account.

What then should be done in this case ? I answer, We should always remember that the faculties of our souls are improved just as our bodies are. Would you have a man perform any manual operation dexterously, let his natural parts be ever so good, still nobody expects this from him, unless he has been used to it. Just so it is in the mind ; would you have a man reason well, you must use him to it betimes, exercise his mind in observing and following the connexion of ideas. Nothing does this better than mathematics ; which should therefore be taught all those, who have the time and opportunity ; not so much to make them mathematicians, as to make them reasonable creatures ; for though we all call ourselves so, because we are born to it, yet nature gives us but the seeds of it ; use and exercise only make us so.

This has been the less taken notice of because every one in his private affairs uses reasoning enough to denominate him reasonable. But the mistake is, that he who is found reasonable in one thing, is concluded to be so in all ; and to think or say otherwise, is thought so unjust an affront, that nobody ventures on it. It looks like the degradation of a man below the dignity of his nature. It is true, that he who

reasons well in any one thing, has a mind naturally capable of reasoning well in others, and would do so, were his understanding so employed. But he who can reason well to-day about one sort of matters, cannot reason at all about others to-day, though perhaps he may a year hence.

Take a man who has never elevated his thoughts above the narrow compass he has been all his life confined to, you will find him no more capable of reasoning than a perfect idiot. One or two rules, on which his conclusions immediately depend, you will find to be the maxims he has been guided by : take these from him, and he is perfectly at a loss ; and either returns to his old maxims again, as the foundations of all truth, notwithstanding all that can be said to show their weakness ; or if he gives them up to reason, he gives up, at the same time, all farther inquiry, and thinks there is no such thing as certainty.

What then ! can grown men never enlarge their understandings ? I say not so ; but this I think I may say, that it will not be done without application, requiring more time than grown men, settled in their course of life, will allow to it ; and therefore it is very seldom done. And this very capacity of attaining it by exercise, proves that we must expect nothing from our understandings any farther than they are perfected by habits. This is very observable to those who have to do with young scholars, especially in mathematics : whose minds, opening by degrees, will stick a long time at a part of demonstration, not for want of will or application, but really for want of perceiving the connexion of two ideas, that, to one whose understanding is more exercised, is as visible as any thing can be.

MATHEMATICS.—I have mentioned mathematics as a way to settle in the mind a habit of reasoning closely and in train ; not that it is necessary for all men to be deep mathematicians, but that, having got the way of reasoning, which that study necessarily

brings the mind to, they may be able to transfer it to other parts of knowlege. For in all reasoning, every single argument should be managed as a mathematical demonstration; where the connexion of ideas must be followed till the mind is brought to the source on which it bottoms.

Where a truth is made out by one demonstration, there needs no farther inquiry; but in all probabilities, where demonstration is wanted to establish the truth, it is not enough to trace one argument to its source, but all the arguments must be laid in balance one against another, on the whole of which the understanding determines its assent.

To this way of reasoning the understanding should be accustomed; which is so little used, that even learned men oftentimes seem to have no notion of it; who, as in the schools, insist on one topical argument, by the success of which the truth of the question is to be determined; which is all one as if a man should balance an account by one sum charged and discharged, when there are a hundred others to be taken into consideration.

To this perhaps it will be objected, that to manage the understanding as I propose would require every man to be a scholar, and to be furnished with all the materials of knowlege, and exercised in all the ways of reasoning. To which I answer, that it is a shame for those that have time and the means to attain knowlege, to want any helps or assistance for the improvement of their understandings that are to be got at. Those, methinks, who by the industry and parts of their ancestors have been set free from a constant drudgery to their backs and their bellies, should bestow some of their spare time on their heads, and open their minds by some trials and essays in all the sorts and matters of reasoning. I have before mentioned mathematics, and I now add algebra; which gives new helps and views to the understanding; not that every man should be a

deep algebraist ; but because in these studies a man will see that however good he may think his understanding, yet in many things it may fail him ; nor would they be so apt as they now are to think that nothing could be added to the acuteness and penetration of their understandings.

Secondly, the study of mathematics would show the necessity there is, in reasoning, to separate the ideas which do, from those which do not relate to the proposition in hand. This is what is absolutely requisite to just reasoning, though so seldom carefully practised. In cases where it is thought demonstration has nothing to do, men reason as it were in the lump ; and if on a confused view, or a partial consideration, they can raise the appearance of a probability, they usually rest content ; especially in a dispute where every little straw is laid hold on, and every thing that can be drawn in to give a color to the argument, is advanced with ostentation.

As to men whose fortunes and time is narrower, what may suffice them is not of that vast extent as may be imagined, and so comes not within the objection.

Nobody is under an obligation to know every thing. Knowledge and science in general, is the business only of those who are at ease and leisure. Those who have particular callings ought to understand them : and it is no unreasonable proposal, nor impossible to be compassed, that they should think and reason right about what is their daily employment.

RELIGION.—Besides his particular calling for the support of this life, every one has a concern in a future life, which he is bound to look after. Men therefore cannot be excused from understanding the words, and framing the general notions, relating to religion right. The sabbath, besides other days of rest, allows in the Christian world time enough for this (had they no other idle hours), if they would but make use of

these vacancies from their daily labor, and apply themselves to an improvement of knowledge, with as much diligence as they often do to a great many other things that are useless. The original make of their minds is like that of other men, and they would be found not to want understanding fit to receive the knowledge of religion, if they were a little encouraged and helped in it as they should be. For there are instances of very mean people, who have raised their minds to a great sense and understanding of religion. And though these have not been so frequent as could be wished, yet they are enough to clear that condition of life from a necessity of gross ignorance, and to show that more might be brought to be rational creatures and Christians (for they can hardly be thought really to be so, who, wearing the name, know not so much as the very principles of that religion,) if due care were taken of them. For, if I mistake not, the peasantry lately in France (a rank of people under a much heavier pressure of want and poverty than the day-laborers in England), of the reformed religion, understood it much better, and could say more for it, than those of a higher condition among us.

But if it shall be conceded that the meaner sort of people must give themselves up to a brutish stupidity in the things of their nearest concernment, this excuses not those of a freer fortune and education, if they take no care to employ their understandings as they ought, and set them right in the knowledge of those things for which they were principally given.

IDEAS.—Outward corporeal objects, that constantly importune our senses and captivate our appetites, fail not to fill our heads with lively and lasting ideas of that kind. Here the mind needs not be set on getting greater store; they offer themselves so fast, and in such plenty, that the mind wants room for others that it has more need of. To fit the understanding, therefore, for such reasonings, care should be taken to fill

it with moral and more abstract ideas; for these not offering themselves to the senses, but the understanding, people are generally so neglectful of a faculty they are apt to think wants nothing, that I fear most men's minds are more unfurnished with such ideas than is imagined. They often use the words, and how can they be suspected to want the ideas? What I have said in the third book of my Essay will excuse me from any other answer to this question. But to convince people of what moment it is to their understandings to be furnished with such abstract ideas steady and settled in it, give me leave to ask, How can any one be able to know, whether he be obliged to be just, if he has not established ideas in his mind of obligation and of justice? And if men find a difficulty to see the agreement or disagreement of two angles which lie before their eyes in a diagram, how utterly impossible will it be to perceive it in ideas, that have no other sensible objects to represent them to the mind but sounds, with which they have no manner of conformity, and therefore had need to be clearly settled in the mind themselves, if we would make any clear judgment about them? This, therefore, is one of the first things the mind should be employed about in the right conduct of the understanding, without which it is impossible it should be capable of reasoning right about those matters. But in these, and all other ideas, care must be taken that they harbor no inconsistencies, and that they have a real existence, and are not chimeras merely.

PREJUDICES.—Every one is forward to complain of the prejudices that mislead other men, as if he had none of his own. This being objected on all sides, it is agreed that it is a fault, and a hinderance to knowledge. What now is the cure? No other but this, that every man should let alone others' prejudices, and examine his own. Nobody is convinced of his by the accusation of another: he recriminates by the same

rule and is clear. The only way to remove this great cause of ignorance and error is, for every one impartially to examine himself. If others will not deal fairly with their own minds, does that make my errors truth? or ought it to make me in love with them, and willing to impose on myself? If others love cataracts on their eyes, should that hinder me from couching mine? Every one declares against blindness; and yet who almost is not fond of that which dims his sight, and keeps the clear light out of his mind, which should lead him into truth and knowlege? False or doubtful positions, relied on as unquestionable maxims, keep those in the dark from truth, who build on them. Such are usually the prejudices imbibed from education, party, reverence, fashion, interest, &c. This is the mote which every one sees in his brother's eye, but never regards the beam in his own. For who is there that ever fairly examines his own principles, and sees whether they are such as will bear the trial? Yet this should be one of the first things every one should set about, who would rightly conduct his understanding in the search of truth.

To those who are willing to get rid of this great hinderance of knowlege, the impostor Prejudice, who dresses up falsehood in the likeness of truth, I shall offer this one mark, by which it may be known. He that is strongly of any opinion, must suppose that his persuasion is built on good grounds; and that they are arguments, and not inclination or fancy, that make him so confident and positive in his tenets. Now if, after all his profession, he cannot bear any opposition to his opinion, much less examine and weigh the arguments on the other side, does he not plainly confess it is prejudice that governs him? And it is not evidence of truth, but some beloved presumption, that he desires to rest undisturbed in. For if what he holds be, as he gives out, well fenced with evidence, what need he fear to put it to the proof? But if his

assent goes beyond his evidence, he owes this excess of adherence only to prejudice, and does in effect own as much, when he refuses to hear what is offered against it; declaring thereby, that it is not evidence he seeks, but the quiet enjoyment of the opinion he is fond of, with a forward condemnation of all that may stand in opposition to it, unheard, and unexamined. He that would, however, acquit himself in this case as a lover of truth, not giving way to any pre-occupation or bias that may mislead him, must do two things that are not very common, nor very easy.

INDIFFERENCY.—First, he must not wish any opinion to be true, until he knows it to be so, and then he will not need to wish it: for nothing that is false can deserve our good wishes. And yet nothing is more frequent than to find men so fond of certain tenets on no other evidence but custom, and think that they must maintain them, or all is gone; though they have never examined the ground they stand on, nor can make them out to themselves or others. We should contend earnestly for the truth; but we should first be sure that it is truth.

EXAMINE.—Secondly, he must do that, which he will find himself very averse to, as judging the thing unnecessary, or himself incapable of doing it. He must try whether his principles be true or not, and how far he may safely rely on them; at least if he profess to love truth, and would not impose on himself; which is a surer way to be made a fool of, than by being exposed to the sophistry of others. For as this disposition to put a cheat on ourselves is constantly at work, it leads us, by a wrong use of our understandings, to build our tenets on principles taken on trust; and then, without ever having examined them, we believe a whole system, on a presumption that they are true and solid: and what is all this but childish, shameful, senseless credulity?

In these two things, viz. an indifferency for any thing

but truth, and in the not building on any principles, until we are fully convinced of their truth, consists that freedom of the understanding, which is necessary to a rational creature; who, if he be under the constraint of holding opinions on the authority of any thing but what his own mind feels to be evidence, is exposed to an imposition, of all others the worst and most dangerous. For we not only impose on ourselves, but in that part which ought to be kept most free from imposition. The world is apt to cast great blame on those who have an indifferency for opinions, especially in religion. I fear this is the foundation of great error and worse consequences. To be indifferent which of two opinions is true, is the right temper of the mind, that preserves it from being imposed on. But to be indifferent whether we embrace falsehood for truth, or no, is the great road to error; for, not being indifferent which opinion is true, they suppose, without examining, that what they hold is true, and then think they ought to be zealous for it; and thus, by their warmth, prove they are not indifferent to their own opinions, but very indifferent whether they be true or false, since they cannot endure to have any doubts raised, or objections made, against them.

These are the general miscarriages, which men should avoid in a right conduct of their understandings.

There are also several weaknesses and defects in the understanding, either from the natural temper of the mind, or ill habits taken up, which hinder its progress to knowlege. I shall set down some few to excite men, especially those who make knowlege their business, to look into themselves, and observe whether they do not indulge some weakness, in the management of their intellectual faculty, prejudicial to their search of truth.

OBSERVATIONS.—Matters of fact are the undoubted foundations on which our civil and natural knowlege is built: from which the understanding draws conclu-

sions, as standing rules of knowledge and practice. Yet some there are who, very assiduous in reading, however do not much advance their knowledge by it. Delighted with the stories that are told, but not making observations on what they read, they are little improved by all that crowd of particulars that pass through their brains: for even if their memories be retentive, although they have the materials of knowledge, still, like those for building, they are of no advantage, if no other use be made of them, but to let them lie heaped up together. Others lose the improvement they should make of matters of fact by drawing general conclusions from every particular they meet with. These make as little true benefit of history as the other, nay, being of forward spirits, receive more harm by it; inasmuch as it is worse to steer one's thoughts by a wrong rule, than to have none at all; error doing to busy men more harm, than ignorance to the slow. Between these, those seem to do best who, taking material hints from single matters of fact, carry them in their minds till they find history confirms these first and imperfect observations, to be then, but not till then, established into rules fit to be relied on.

BIAS.—Next to these we may place those, who suffer their passions to influence their judgments, especially in points connected with their interests. Truth, all simple and pure, will bear no mixture of any thing else with itself. It is rigid and inflexible to any bye interests; and so should the understanding be, whose use and excellency lies in conforming itself to it. To think of every thing just as it is in itself, is the proper business of the understanding. This all men at first hearing allow. And yet there is nothing more frequent than for men to do the contrary, and think they have reason to do so if they have but a pretence that it is for God, or a good cause, that is, for themselves and their own party: for those in their turns the several sects of men, especially in matters of religion,

entitle God and a good cause. But God requires not men to misuse their faculties for him, nor to lie to others or themselves for his sake; which they purposely do, who will not suffer their understandings to have right conceptions of the things proposed to them. And as for a good cause, that needs not such ill helps; if it be good, truth will support it, and it has no need of falsehood.

ARGUMENTS.—Very much of kin to this is the hunting after arguments to make good one side of a question, and wholly to neglect those which favor the other side. What is this but wilfully to misguide the understanding? Others espouse opinions that best comport with their power and profit, and then seek arguments to support them. But truth, lit on this way, is of no more avail to us than error; for what is so taken up may be false as well as true, and he has not done his duty who has thus stumbled on truth in his way to preferment.

There is another, but more innocent way of collecting arguments, familiar among bookish men, which is, to furnish themselves with the arguments they meet with *pro* and *con* in the questions they study. This helps them not to judge right, nor argue strongly, but only to talk copiously on either side, without being settled in their own judgments. Such variety of arguments only distract the understanding. The only sure way to get true knowledge, is to form in our minds clear, settled notions of things, with names annexed to those determined ideas. These we are to consider, and in their several relations, and not to amuse ourselves with words of indetermined signification, which we can use in several senses to serve a turn. It is in the perception of the relation which our ideas have one to another, that real knowledge consists: and when a man has once gained this perception, he will be able to judge of what other people say, and will not need to be led by

the arguments, or rather plausible sophistry, of others. This will teach him to state the question right, and see whereon it turns; and to stand, as it were, on his own legs. Whereas, by collecting arguments by heart, he will be but a retainer to others; and when any one questions the foundations they are built on, he will be at a nonplus, and be fain to give up his implicit knowlege.

HASTE.—Labor for labor's sake is against nature. The understanding, like the other faculties, choosing always the shortest way to its end, would presently obtain the knowlege it is about, and then set on some new inquiry. But this haste often misleads it, by making it content with improper ways of search. Sometimes it rests on testimony, where testimony has nothing to do, because it is easier to believe than to be convinced. Sometimes it contents itself with one argument, and rests satisfied with that, as it were a demonstration; whereas the thing under proof is not capable of demonstration, and therefore must be submitted to the trial of probabilities. In others it is determined by probabilities, where demonstration may be had. In every question the nature of the proof of which it is capable, should first be considered. To multiply arguments, especially frivolous ones, only encumbers the memory to no purpose, and hinders it from seizing the truth in all cases capable of demonstration. In this superficial way, indeed, there is more variety of plausible talk, but the mind is not enlarged as it should be in knowlege. To the same haste it is owing, that men do not duly trace arguments to their foundation; they see a little, presume a great deal, and so jump to the conclusion. This is indeed a short way to opinionatry, but the farthest way to knowlege. For he that will know, must, by the connexion of the proofs, see the truth, and the ground it stands on: and therefore, if he has for haste

skipt over what he should have examined, he must begin and go over all again, or else he will never come to knowlege.

DESULTORY.—Another fault of as ill consequence as this, is the skipping from one sort of knowlege to another. Some men's tempers are quickly weary of any one thing. Constancy and assiduity is what they cannot bear; the same study long continued in, becomes as intolerable to them as the appearing long in the same fashion is to a court lady.

SMATTERING.—Others, that they may seem universally knowing, get a little smattering in every thing. Both these may fill their heads with superficial notions of things, but are very much out of the way of attaining truth or knowlege.

UNIVERSALITY.—I do not here speak against the taking a taste of every sort of knowlege; it is certainly very useful to form the mind: but then it must be done in a different way, and to a different end. Not for vanity, to fill the head with shreds of all kinds, that he who is possessed of such frippery may be able to match the discourse of all he shall meet with, as if nothing could come amiss to him, or which he was not master of. This is an excellency, and a great one, to have a real knowlege in all or most of the objects of contemplation. But it is what the mind of one man can hardly attain; and were it more attainable, would be scarcely desirable. For a man to understand fully his business in matters of state or church, is enough to take up his whole time; and there are few that inform themselves even in these so fully as they should do. But though few men extend their thoughts towards universal knowlege; yet if the right way were taken, men of little business and great leisure might do a great deal more than is usually done; and thus, by a little insight in those parts of knowlege which are not his proper business, accustom his mind to the proper ways of examining ideas and their

relations. Besides, this exercise of the understanding in the several ways of reasoning, which the most skilful have made use of, gives a suppleness to apply itself more dexterously to the turns of the matter in all its researches. Further, this universal taste of all the sciences, before the mind has grown in love with any one pursuit, will prevent another evil, commonly observed in those who have been seasoned only by one part of knowlege. Let a man be given up to the contemplation of one sort of knowlege, the mind will take such a tincture from a familiarity with that object, that every thing else will be brought under the same view. A metaphysician will bring ploughing and gardening immediately to abstract notions: the history of nature shall signify nothing to him. An alchymist, on the contrary, shall reduce divinity to the maxims of his laboratory, explain morality by *sal*, *sulphur*, and *mercury*, and allegorise the Scripture and its mysteries into the philosopher's stone. And I heard once a man, who had a more than ordinary excellency in music, seriously accommodate Moses's seven days of the first week to the notes of music, as if from thence had been taken the measure and method of the creation. It is therefore of no small consequence to keep the mind free from such a possession; which is best done by giving it a view of the whole intellectual world, where it may see the order and beauty of the whole.

If this be that which old men will not be easily brought to, it is fit at least that it should be practised in the breeding of the young. The business of education is not to make them perfect in any one of the sciences, but so to dispose their minds as may best make them capable of any, when they shall apply themselves to it. If men are for a long time accustomed only to one range of thoughts, their minds grow stiff in it; and do not readily turn to another. It is therefore to give them this freedom, that they should be made to look into all sorts of knowlege, and exer-

cise their understandings, as productive of an increase of the powers and activity of the mind, not as an enlargement of its possessions.

READING.—That which great readers are apt to be mistaken in is, that those who have read every thing are thought to understand every thing too ; but it is not always so. Reading furnishes the mind only with materials of knowledge ; it is thinking makes what we read ours. We are of the ruminating kind, and it is not enough to cram ourselves with a great load of food ; unless we chew it over again, it will not give us strength and nourishment. There are indeed in some writers instances of deep thought, close and acute reasoning, and ideas well pursued. The light these would give would be of great use if their readers would observe and imitate them ; all the rest are but particulars fit to be turned into knowledge : but that can be done only by our examining what is said ; otherwise, it is but so much loose matter floating in our brain. The memory may be stored, but the judgment is not improved nor the stock of knowledge increased by being able to repeat what others have said, and that too very often on weak and wrong principles ; and even where the principles are right, the deductions are frequently wrong. But such an examen every reader is not forward to make ; especially they who have given themselves up to a party, and only hunt for what they can scrape together in support of their tenets. Others, of more indifferency, often want attention and industry. The mind is slow to trace every argument to its original, and to see on what basis it stands, and how firmly. Yet it is this alone, that gives so much the advantage to one man more than another in reading. The mind should, by severe rules, be tied down to this, at first uneasy, task ; and use will give it facility ; so that those who are accustomed to it, will readily, as it were with one cast of the eye, take a view of the argument, and see where it bottoms.

This young beginners should be shown the use of, that they might profit by their reading. Those who are strangers to it, will think it too great a clog in the way of men's studies; and suspect they shall make but small progress, if, in the books they read, they must stand to unravel every argument, and follow it step by step up to its original. This, however, is an objection that will weigh only with those whose reading is designed for much talk and little knowledge; and I have nothing to say to it, as I am here inquiring into the conduct of the understanding in its progress towards knowledge; and to those who aim at that, I may say, that he who fair and softly goes steadily forward in a course that points right, will sooner be at his journey's end, than he that runs after every one he meets, though he gallop all day at full speed.

INTERMEDIATE PRINCIPLES.—To save the long progression of the thoughts to first principles in every case, the mind should provide itself with intermediate principles, which it might have recourse to in the examining those positions that come in its way. These, though not self-evident, may, if they have been made out by unquestionable deduction, be depended on as certain truths, and serve to prove other points depending on them, by a shorterview than by remote maxims. And thus do mathematicians, who do not in every new problem run back to the first axioms, but apply certain theorems, settled on demonstration, to resolve multitudes of propositions which depend on them, and are as firmly made out from thence, as if the mind went afresh over every link of the whole chain. Only in other sciences great care is to be taken that they establish those intermediate principles, with as much caution as mathematicians use in the settling any of their great theorems: otherwise men will lay a trap for themselves, and mistake falsehood for truth.

PARTIALITY.—As there is a partiality to opinions, which is apt to mislead the understanding; so there is

often a partiality to studies, which is prejudicial also to knowledge. Sciences which men are particularly versed in, they are apt to extol, as if that part of knowledge were alone worth the having. This is the effect of ignorance, and not knowledge; the being puffed up with a flatulency, arising from a narrow comprehension. It is not amiss that every one should relish the science that he has made his peculiar study; a view of its beauties, and a sense of its usefulness, carries a man on with the more delight in the pursuit of it. But the contempt of all other knowledge, except that wherein I have got some smattering, is not only the mark of a vain or little mind, but does this prejudice in the conduct of the understanding, that it coops it up within narrow bounds, and hinders it from looking abroad into other provinces of the intellectual world, more beautiful and fruitful than that which it had until then labored in; and where it might find, besides new knowledge, ways or hints whereby it might be enabled the better to cultivate its own.

THEOLOGY.—There is indeed one science, incomparably above all the rest, where it is not by corruption narrowed into a trade for ill ends and secular interests; I mean theology, which, containing the knowledge of God and his creatures, our duty to him and our fellow-creatures, and a view of our present and future state, is the comprehension of all other knowledge directed to its true end; i. e. the honor and veneration of the Creator, and the happiness of mankind. This is that noble study which is every man's duty, and which every one that can be called a rational creature is capable of. The works of nature, and the words of revelation, display it to mankind in characters so large and visible, that those who are not quite blind, may in them read and see the first principles and most necessary parts of it; and from thence, as they have time and industry, may be enabled to go on to the more abstruse parts of it, and penetrate into those infinite

depths, filled with the treasures of wisdom and knowledge. This is that science which would truly enlarge men's minds, were it studied, or permitted to be studied every where with that freedom, love of truth, and charity, which it teaches; and were not made, contrary to its nature, the occasion of strife, faction, or malignity, and narrow impositions.

PARTIALITY.—This partiality, where it is not permitted an authority to render all other studies insignificant or contemptible, is often indulged so far as to be made use of in other parts of knowledge, to which it does not at all belong, and wherewith it has no manner of affinity. Some men have so used their heads to mathematical figures, that, giving a preference to the methods of that science, they introduce diagrams into divinity or politics, as if nothing could be known without them; others, accustomed to abstract speculations, run natural philosophy into metaphysical notions; and even religion and morality are treated of in the terms of the laboratory of chemistry! But he that will rightly conduct his understanding to the knowledge of things, must not, by a fondness for what he has found useful and necessary in one, transfer it to another science, where it serves only to perplex the understanding. It is a truth, that *res nolunt male administrari*: it is no less certain, *res nolunt male intelligi*. Things themselves are to be considered as they are in themselves; and to have right conceptions about them, we must bring our understandings to the inflexible natures and unalterable relations of things, and not endeavor to bring things to any preconceived notions of our own.

There is another partiality very observable in men of study, no less ridiculous than the former; and that is, a fantastical and wild attributing all knowledge to the ancients alone, or to the moderns. This raving on antiquity in matter of poetry, Horace has wittily exposed in one of his satires. The same sort of madness

may be found in reference to all the other sciences. Some will not admit an opinion not authorised by men of old, who were then all giants in knowlege. Nothing is to be put into the treasury of truth which has not the stamp of Greece or Rome on it; and, since their days, will scarce allow that men have been able to see, think, or write. Others, with a like extravagancy, condemn all that the ancients have left us, and, being taken with the moderns' inventions and discoveries, lay by all that went before, as if whatever is called old must have the decay of time on it, and truth too were liable to mould and rottenness. Men, I think, have been much the same for natural endowments in all times. Fashion and education have made one generation differ much from another in arts and sciences. But truth is always the same; time alters it not, nor is it the better or worse for being of ancient or modern tradition. Many were eminent in former ages for their discovery and delivery of it; but though the knowlege they have left us be worth our study, yet they exhausted not all its treasure; they left a great deal for the industry and sagacity of after ages, and so shall we. That was once new to them, which any one now receives with veneration for its antiquity; nor was it the worse for appearing as a novelty: and that which is now embraced for its newness, will, to posterity, be old, but not thereby be less true. There is no occasion on this account to oppose the ancients and the moderns to one another, or to be squeamish on either side. He that wisely conducts his mind in the pursuit of knowlege, will gather what lights he can from either of them, without adoring the errors, or rejecting the truths, which he may find mingled in them.

Another partiality may be observed, in some to vulgar, in others to heterodox, tenets. Some are apt to conclude, that what is the common opinion cannot but be true: so many men's eyes, they think, cannot

but see right; so many men's understandings of all sorts cannot be deceived; and therefore will not venture to look beyond the received notions of the place and age, nor be so presumptuous as to be wiser than their neighbors. They are content to go with the crowd, and so go easily; which they think is going right, or at least serves them as well. But, however *vox populi vox Dei* may have prevailed as a maxim, yet I do not remember that God ever delivered his oracles by the multitude, or Nature her truths by the herd. On the other side, some fly all common opinions as either false or frivolous. The title of many-headed beast is a sufficient reason to them to conclude that no truths of weight or consequence can be lodged there. Vulgar opinions are suited to vulgar capacities, and adapted to the ends of those that govern. He that will know the truth of things, must leave the beaten track, which none but weak and servile minds are satisfied to trudge along continually in. Such nice palates relish nothing but strange notions; whatever is commonly received, has the mark of the beast on it, and they think it a lessening to them to hearken to it; their mind runs only after paradoxes; these they seek, these they embrace, these alone they vent, and so, as they think, distinguish themselves from the vulgar. But common or uncommon are not the marks to distinguish truth or falsehood, and therefore should not be any bias to us in our inquiries. We should not judge of things by men's opinions; but of opinions by things. The multitude reason but ill, and therefore cannot be relied on, nor should be followed as a sure guide; but philosophers, who have quitted the popular doctrines of their countries, have fallen into as absurd opinions as ever common reception countenanced. It would be madness to refuse to breathe the common air, or quench one's thirst with water, because the rabble use them to these purposes: and if there are conveniences of life which common use reaches not, it is not reason

to reject them because they are not grown into the ordinary fashion of the country, and every villager doth not know them.

Truth, whether in or out of fashion, is the measure of knowledge, and the business of the understanding; whatsoever is besides that, however authorised by consent, or recommended by rarity, is nothing but ignorance, or something worse.

Another sort of partiality there is, whereby men impose on themselves, and by it make their reading little useful to themselves; I mean the making use of the opinions of writers, and laying stress on their authorities, wherever they find them favor their own opinions.

There is nothing has done more harm to men dedicated to letters, than giving the name of study to reading, and making a man of great reading to be the same with a man of great knowledge. All that can be recorded in writing, are only facts or reasonings. Facts are of three sorts :

1. Of natural agents, observable in the ordinary operations of bodies one on another, when left to themselves, or acted on in an artificial manner.

2. Of voluntary agents, observable in the acts of men in society, which make up civil and moral history:

3. Of opinions.

In these three consist that which commonly has the name of learning; to which, perhaps, some may add a distinct head of critical writings, which is nothing but matter of fact, and resolves itself into this, that such a man, or set of men, used such a word or phrase in such a sense, i. e. that they made such sounds the marks of such ideas.

Under reasonings I comprehend all the discoveries of general truths made by human reason. And this is that knowledge which is properly the business of those who pretend to improve their understandings, and make themselves knowing by reading.

Books are looked on as the great instruments of knowlege ; and yet they often keep bookish men from attaining solid knowlege : nor is there any thing where-in the understanding needs a more wary conduct, than in the use of books ; without which they will prove rather innocent amusements than profitable employments, and bring but small additions to our knowlege. For though there be no defect in our intellectual faculties to which our little progress can be imputed, we err in supposing that, by reading, the author's knowlege is transferred into the reader's understanding ; and so it is, but not by bare reading, but by examining and understanding what he writ. Without this a man may read the discourses of a very rational author, and yet acquire not one jot of his knowlege ; which consisting only in the perceived connexion of the ideas made use of in his reasonings, the reader's knowlege is no farther increased, than he perceives that, so much as he sees of this connexion, so much he knows of the truth or probability of that author's opinions.

All that he relies on without this perception, he takes on trust on the author's credit, without any knowlege of it at all.

Writers of this or former ages, may be good witnesses of matters of fact which they deliver, which we may do well to take on their authority ; but their credit cannot at all affect the truth or falsehood of opinions, which have another sort of trial by reason, and proof which they themselves made use of ; and so must others too that will partake in their knowlege. For saving us the pains in searching out those proofs which they have collected for us, and which, after all our pains, we might not have found, nor been able to set in so good a light as they have done, we are mightily beholden to judicious writers of all ages, of whose instruction we may make the right use, if, instead of running them over in a hasty perusal, and perhaps lodging some of their remarkable passages in our memo-

ries, we enter into their reasonings, examine their proofs, and then judge of the truth or falsehood of what they advance—not by any opinion we have entertained of the author, but by the evidence he produces. Knowing is seeing. It is madness therefore to persuade ourselves that we do so by another man's eyes, let him use never so many words to tell us that what he asserts is very visible. Until we ourselves see it with our own eyes, and perceive it by our own understandings, we are as much in the dark, and as void of knowledge, as before, let us believe any author as much as we will.

Euclid and Archimedes are allowed to have demonstrated what they say : and yet whoever shall read their writings, without perceiving the connexion of their proofs, though he may understand all their words, yet he is not the more knowing. He may believe, indeed, but does not know what they say ; and so is not advanced one jot in mathematical knowledge by all his reading of those mathematicians.

HASTE.—The eagerness of the mind after knowledge, if not warily regulated, is often a hinderance to it. It still presses into new objects, and catches at the variety of knowledge, and therefore often stays not long enough on what is before it, to look into it as it should, for haste to pursue what is yet out of sight. He that rides post through a country, may be able, from the transient view, to tell how in general the parts lie : but the more useful observations of the soil, plants, animals, and inhabitants, with their several sorts and properties, must necessarily escape him ; and it is seldom men ever discover the rich mines, without some digging. Nature commonly lodges her treasure and jewels in rocky ground. If the matter be knotty, and the sense lies deep, the mind must stop, and stick on it with labor and thought, and not leave it until it has got possession of truth. But here care must be taken to avoid the other extreme : a man must not stick at

every nicety, and expect mysteries of science in every scruple that he may raise. He that will stand to examine every pebble that comes in his way, is as unlikely to return laden with jewels, as the other that travelled full speed. Truths are not the better nor the worse for their obviousness or difficulty, but their value is to be measured by their usefulness and tendency. Insignificant observations should not take up any of our minutes; nor should those that enlarge our views be neglected, though they spend some of our time in a fixed attention.

There is another haste that often misleads the mind, if left to itself. The understanding is naturally forward, not only to learn its knowledge by variety, but also eager to enlarge its views by running too fast into general conclusions, without a due examination of particulars. By this the mind enlarges its stock, not of realities, but fancies; and such theories, built on narrow foundations, stand but weakly, and if they fall not themselves, are with difficulty supported against the assaults of opposition. General observations drawn from particulars are the jewels of knowledge, comprehending great store in a little room; but they are therefore to be made with the greater care and caution, lest, if we take counterfeit for true, our loss and shame be the greater, when our stock comes to a severe scrutiny. One or two particulars may suggest hints of inquiry, and they do well who take those hints; but if they turn them into general rules, they only impose on themselves by propositions assumed for truths without sufficient warrant.

ANTICIPATION.—Many men so give themselves up to the first anticipations of their minds, of which they are as fond as of their first-born, that they will by no means recede from the judgment they have once made, or conceit they have once entertained. This is a fault in the conduct of the understanding, since this stiffness of the mind does not arise from an adherence to truth,

but a submission to prejudice. It is an unreasonable homage paid to prepossession, whereby we show a reverence not to (what we pretend to seek) truth ; but what by hap-hazard we chance to light on, be it what it will.

RESIGNATION.—Contrary to these, are those who always resign their judgment to the last man they heard, or whose book they read. Truth never sinks into these men's minds ; but,ameleon-like, they take the color of what is laid before them, and as soon resign it to the next that happens to come in their way. The order wherein opinions are proposed or received by us, is no rule of their rectitude, nor ought to be a cause of their preference. First or last in this case, is the effect of chance, and not the measure of truth or falsehood. A man may as reasonably draw cuts for his tenets, regulate his persuasion by the cast of a die, as take it up for its novelty, or retain it because it had his first assent, and he was never of another mind. Well-weighed reasons are to determine the judgment ; those the mind should be always ready to submit to, and by their testimony entertain or reject any tenet indifferently, whether it be a perfect stranger, or an old acquaintance.

PRACTICE.—Though the faculties of the mind are improved by exercise, yet they must not be put to a stress beyond their strength. *Quid valeant humeri, quid ferre recusent*, must be made the measure of every one's understanding, who has a desire not only to perform well, but to keep up the vigor of his faculties. The mind, by being engaged in a task beyond its strength, like the body strained by lifting at a weight too heavy, has often its force broken, and gets an aversion to any vigorous attempt ever after. A sinew cracked seldom recovers its former strength ; or at least the tenderness of the sprain remains a good while after, and the memory of it longer, and leaves a lasting caution in the man, not to put the part quickly again to

any robust employment. So it fares with the mind ; once jaded by an attempt above its power, it either is disabled for the future, or else checks it at any vigorous undertaking ever after, at least is very hardly brought to exert its force again on any subject that requires thought. The understanding should be brought to the knotty parts of knowledge, that try the strength of thought, by insensible degrees ; and in such a gradual proceeding, nothing is too hard for it. Nor let it be objected, that such a slow progress will never reach the extent of some sciences. It is not to be imagined how far constancy will carry a man. He that begins with the calf, may carry the ox : but he that will at first go to take up an ox, may so disable himself, as not to be able to lift up a calf after that. When the mind, by insensible degrees, has brought itself to close thinking, it will be able to cope with difficulties, and master them without any prejudice to itself. But though putting the mind unprepared on an unusual stress, that may discourage or damp it for the future, ought to be avoided ; yet this must not run it, by an over-great shyness of difficulties, into a lazy sauntering, about ordinary things, that demand no application. This enervates the understanding, and makes it unfit for labor ; and when the mind has been once habituated to this lazy recumbency on the obvious surface of things, it is in danger to rest satisfied there, and go no deeper, since it cannot do it without pains ; and there is reason to fear he will never reconcile himself to the fatigue of turning in his mind, with the view to discover their more retired and valuable secrets.

WORDS.—They who would conduct their understandings right, ought not to take any term, however authorised by the language of the schools, to stand for any thing, until they have an idea of it. A word may be of frequent use and great credit with several authors, and be by them made use of, as if it stood for some

real being ; but yet, if he that reads cannot frame any distinct ideas of that being, it is to him a mere empty sound, and he learns no more by all that is said of it, or attributed to it, than if it were affirmed only of that bare empty sound. They who would advance in knowlege, and not deceive and swell themselves with a little articulated air, should lay down this as a fundamental rule, not to take words for things, nor suppose that names in books signify real entities in nature, until they can frame clear and distinct ideas of those entities. Of empty terms, many are to be found in learned writers, to which they had recourse to eke out their systems, where their understandings could not furnish them with conceptions from things. And yet when men have any conceptions, they can, if they are never so abstruse, explain them and the terms they use for them. For our conceptions being nothing but ideas, which are all made up of simple ones ; if they cannot give us the ideas their words stand for, it is plain they have none, or else they conceal their ideas by the words. But as words are not made to conceal, but to declare and show something ; where they are, by those who pretend to instruct, otherwise used, they conceal indeed something ; but that which they conceal is nothing but the ignorance, error, or sophistry of the talker, for there is in truth nothing else under them.

WANDERING.—That there is a constant succession and flux of ideas in our minds, every one may observe in himself. This may deserve some part of our care in the conduct of our understandings ; and may be of great advantage, if we can by use get such a power over our minds, as to be able to keep our ideas in the train required ; or, if we cannot prevent new thoughts from interrupting the previous train, to prevent them from interfering for too long a time, and with too great an effect. This is not so easy to be done as perhaps may be imagined ; and may be, if not the chief,

yet one of the great differences that carry some men in their reasoning so far beyond others, where they seem to be naturally of equal parts. A proper and effectual remedy for this wandering of thoughts, I would be glad to find. He that shall propose such a one, would do great service to the studious; and perhaps help unthinking men to become thinking. Hitherto I have discovered no other way to keep the thoughts close to their business, but through an endeavor, by frequent application, to get the habit of attention. He that will observe children, will find that even when they endeavor their utmost, they cannot keep their minds from straggling. The way to cure it, is not by chiding or beating, for that presently fills their heads with all the ideas that fear can offer to them. To bring back gently their wandering thoughts, by leading them into the path, and going before them in the train they should pursue, without any rebuke of their roving, I suppose would sooner inure them to attention, than all those rougher methods, which, hindering the application they would promote, introduce a contrary habit.

DISTINCTION.—Distinction and division are very different things; the one being the perception of a difference that nature has placed in things, the other our making a division where there is yet none; the former conducive to true knowledge; the latter serving only to confound the understanding. To observe every the least difference that is in things, argues a clear sight, and keeps the understanding right in its way to knowledge. But to divide every difference that is in things into distinct classes will so run us into particulars, that we shall be able to establish no general truths. The collection of several things into several classes, gives the mind larger views; but we must take care to unite them only so far as they do agree. The right way to knowledge is not to hunt after, and fill the head with such abundance of artificial dis-

inctions, that the mind of the most attentive loses the sight of them ; but to avoid confusion by too few or too many divisions. What are the boundaries of the mean between the two vicious extremes of distinctions; not enough or too many, it is hard to set down in words : clear and distinct ideas is all that can regulate it, together with right consideration of things as they are in themselves. He that has settled in his mind determined ideas, with names affixed to them, will be able to discern all real differences ; or, where the penury of words affords not terms answering every distinct idea, will be able to apply distinguishing terms to the equivocal names he is forced to make use of. This is all the need I know of distinguishing terms ; and in such verbal distinctions, each term of the distinction, joined to that whose signification it distinguishes, is but a new distinct name for a distinct idea. Where they are so, and men have clear and distinct conceptions that answer their verbal distinctions, they are right, and are pertinent as far as they serve to clear any thing in the subject under consideration.

On the other hand, an aptness to jumble things together, wherein can be found any likeness, is a fault in the understanding on the other side, which will not fail to mislead it, and by thus lumping of things, hinder the mind from distinct and accurate conceptions of them.

SIMILES.—The letting the mind run after similes, though it may be useful for the explaining our thoughts to others, yet is by no means so for settling true notions of any thing in ourselves ; because similes always fail in some part, and come short of that exactness which our conceptions should have. This habit indeed makes men plausible talkers ; for those are always most acceptable in discourse who have the way to let in their thoughts into other men's minds with the greatest ease : whether those thoughts are well formed and correspond with things, matters not ; few men

care to be instructed but at an easy rate. They who in their discourse strike the fancy, and take the hearer's conceptions along with them, as fast as their words flow, are the applauded talkers, and go for the only men of clear thoughts. Nothing contributes so much to this as similes, whereby men think they themselves understand better, because similes are the better understood than reasons. But it is one thing to think right, and another to know the right way to lay our thoughts before others with clearness. Well-chosen similes, metaphors, and allegories, do this the best of any thing; because being taken from objects already familiar to the understanding, they are conceived as fast as spoken; and the correspondence being perceived, the thing they are brought to elucidate is thought to be understood also. Thus fancy passes for knowledge, and what is prettily said is mistaken for solid. I say not this to decry metaphor, or to take away that ornament of speech; my business here is not with rhetoricians and orators, but with philosophers and lovers of truth; whose object is to comprehend the matter before them, as it is really in itself. With such all metaphorical expressions do well to illustrate ideas to which the mind is not yet thoroughly accustomed; but then they must be made use of to illustrate ideas that we already have, not to paint to us those which we yet have not. Such borrowed and allusive ideas may follow real and solid truth, to set it off when found, but must by no means be set in its place, and taken for it. If all our search has yet reached no farther than simile and metaphor, we may assure ourselves we rather fancy than know, and have not yet penetrated into the inside and reality of the thing, be it what it will, but content ourselves with what our imaginations, not things themselves, furnish us with.

ASSENT.—In the whole conduct of the understanding, there is nothing of more moment than to know

when and where, and how far, to give assent. Nobody questions that our assent should be regulated by the evidence which things carry with them ; and yet we see men are not the better for this rule : some firmly embrace doctrines on slight grounds, some on no grounds, and some contrary to appearance : some admit of certainty, and are not to be moved in what they hold ; others waiver in every thing ; and there want not those, that reject all as uncertain. What then shall an inquirer after truth do in this case ? I answer, use his eyes. There is in things and ideas, agreement and disagreement, discernible in very different degrees ; and there are eyes in men to see them, if they please ; only their eyes may be dimmed or dazzled, and the discerning sight in them impaired or lost. Interest and passion dazzle ; the custom of arguing, even against our persuasions, dims the understanding, and makes it, by degrees, lose the faculty of discerning clearly between truth and falsehood. It is not safe to play with error, and dress it up in the shape of truth. The mind by degrees loses its natural relish for truth, is reconciled insensibly to any thing that can be dressed up into any appearance of it ; and if the fancy be allowed the place of judgment at first in sport, it afterward comes by use to usurp it ; and what is recommended by this flatterer is received for good. There are so many arts adopted by the fancy to give colors to appearances, that he who is not wary to admit nothing but truth itself, cannot but be caught. He that has a mind to believe, has half assented already ; and he that, by often arguing against his own sense, imposes falsehoods on others, is not far from believing himself. This takes away the great distance there is betwixt truth and falsehood ; it brings them almost together, and makes it no great odds, in things that approach so near, which you take : and when things are brought to that pass, passion or interest easily determine which shall be right.

INDIFFERENCY.—They who keep their minds indifferent to opinions, to be determined only by evidence, will always find the understanding has perception enough to distinguish between evidence and no evidence; and if they neither give nor refuse their assent but by that measure, they will be safe in the opinions they have. They that do not keep up this indifferency in themselves for all but truth, not supposed, but evidenced in themselves, put colored spectacles before their eyes, and look on things through false glasses, and then think themselves excused in following the false appearances, which they themselves put on them. I do not expect that by this attention to nothing but evidence men will be kept perfectly free from error; that is more than human nature can by any means be advanced to: I am only speaking of what they should do, who would deal fairly with their own minds, and make a right use of their faculties in the pursuit of truth. He that by an indifferency for all but truth, suffers not his assent to go faster and farther than his evidence, will learn to examine fairly instead of presuming falsely. At present all the world are born to orthodoxy; they imbibe the opinions of their country and party, and so, never questioning their truth, not one of a hundred ever examines. They are applauded for presuming they are in the right. He that considers, is a foe to orthodoxy; because he may deviate from some of the received doctrines. And thus men inherit local truths, and are inured to assent without evidence. This influences farther than is thought; for what one of a hundred of zealous bigots ever examined the tenets he is so stiff in, or ever thought it his duty so to do? It is lukewarmness to suppose it necessary, and a tendency to apostasy to go about it. And if a man can bring his mind once to be positive for positions, whose evidence he has never examined, and that in matters of greatest concernment to him, what shall keep him from this short way of

being in the right, in cases of less moment ? Thus we are taught to clothe our minds, as we do our bodies; after the fashion in vogue, and it is accounted fantasticalness, or something worse, not to do so : this custom (which who dares oppose ?) makes the short-sighted qigots, and the warier sceptics ; while those that break from it, are in danger of heresy ; for, taking the whole world, how much of it doth truth and orthodoxy possess together ? Though it is by the last alone (which has the good luck to be every where) that heresy is judged : for evidence signifies nothing in the case, and excuse nowhere permitted ; but are sure to be borne down by the infallible orthodoxy of the place. Whether this be the way to truth, let the opinions that take place in the several habitable parts of the earth declare. I never saw any reason yet why truth might not be trusted to its own evidence : if that be not able to support it, there is no fence against error ; and then truth and falsehood are but names, that stand for the same things. Evidence, therefore, is that by which alone every man is (and should be) taught to regulate his assent ; who is then, and then-only, in the right way, when he follows it.

Men deficient in knowlege are usually in one of these three estates ; either wholly ignorant, or as doubting of some proposition they have either embraced formerly, or at present are inclined to ; or, lastly, they do with assurance hold and profess without ever having examined, and being convinced by well-grounded arguments.

Of these the first are in the best state, by having their minds in perfect indifferency, and the likelier to pursue truth, as not having a bias yet to mislead them.

Ignorance with an indifferency for truth is nearer to truth, than opinion with ungrounded inclination ; just as they are more in danger to go out of the way, who are marching under the conduct of a guide, that may mislead them, than he is, who, having not yet taken a

step, is likely to inquire after the right way. The last of the three sorts are in the worst condition of all; for if a man can be fully assured of any thing for a truth, without having examined, what is there that he may not embrace for truth? and if he has given himself up to believe a lie, what means is there left to recover one who can be assured without examining?

But though he that is ignorant is in the best state of the two, so he should pursue truth in a method suitable to that state, i. e. by inquiring directly into the nature of the thing itself, without troubling himself with the disputes of others about it. For he that proceeds on others' principles, though he be resolved to judge of them freely, does yet at least post himself with a party which he will not quit until he be beaten out; by which the mind is insensibly engaged to make what defence it can, and so is unawares biassed. Were it my business to understand physic, the safest and readiest way surely would be to consult Nature herself, and inform myself in the history of diseases and their cures; and not to espouse the principles of, or to engage in the disputes about, any of the systems of physic. For if I espouse the doctrines of any party in their interpretation of any text-book on medical practice, I am more in danger to misunderstand its true meaning, than if I had come to it with a mind unprepossessed by the commentators of my sect; and if it be the case in one science, he that begins to have any doubt of any of his tenets, on any point, which he received without examination, ought, as much as he can, to put himself wholly into this state of ignorance in reference to that question; and examine it with a perfect indifferency, without any inclination to either side, or any regard to his own or others' unexamined opinions. This is no easy thing to do; but I am not inquiring the easy way to opinion, but the right way to truth; which they must follow, who will deal fairly with their understandings.

PERSEVERANCE.—Another fruit from this indifference, and the considering things in themselves abstracted from our own and other men's notions about them, will be that each man will pursue his thoughts in the method most agreeable to the nature of the thing, and to his apprehension of what it suggests to him; in which he ought to proceed with constancy, until he come to a well-grounded resolution wherein he may acquiesce. If it be objected, that this will require every man to quit his other business, and betake himself wholly to study, I answer, I propose no more to any one than he has time for. Some men's condition require no great extent of knowledge; the necessary provision for life swallows the greatest part of their time. But one man's want of leisure is no excuse for the ignorance of those who have time to spare; and every one has time enough to get as much knowledge as is expected of him; and he that does not that, is in love with ignorance, and is accountable for it.

PRESUMPTION.—The variety of distempers in men's minds is as great as of those in their bodies: some are epidemic, few escape them; and every one too, if he would look into himself, would find some defect of his particular genius. There is scarce any one without some idiosyncrasy, that he suffers by. This man presumes on his parts, that they will not fail him at time of need, and so thinks it superfluous labor to make any provision beforehand. His understanding is to him like *Fortunatus's* purse, which is always to furnish him without ever putting any thing into it beforehand: and so he sits still, satisfied without endeavoring to store his understanding with knowledge. It is the spontaneous product of the country, and what need of labor in tillage? Such men may spread their native riches before the ignorant; but they were best not to come to a trial with the skilful. We are born ignorant of every thing. The superficies

of things that surround them, make impressions on the negligent; but nobody penetrates into the inside without labor. Stones and timber grow of themselves; but yet there is no uniform pile, with symmetry and convenience to lodge in, without toil and reflexion. God has made the intellectual world harmonious and beautiful without us; but it will never come into our heads all at once; we must bring it home piecemeal, and there set it up by our own industry, or else we shall have nothing but a chaos within, whatever order there be in things without us.

DESPONDENCY.—On the other side, there are others that despond at the first difficulty, and conclude that the getting an insight in any of the sciences, or making any progress in knowledge, farther than serves their ordinary business, is above their capacities. These sit still, because they think they have not legs to go; while the others do the same because they think they have wings to fly, and can soar on high when they please. To the former one may apply the proverb, *Use legs and have legs*. Nobody knows what strength of parts he has, until he has tried them. And of the understanding one may most truly say, that its force is greater generally than it thinks, until it is put to it. *Vires acquirit eundo*.

And therefore the proper remedy here is but to set the mind to work, and apply the thoughts vigorously to the business; for in the struggles of the mind, as in those of war, a persuasion that we shall overcome any difficulties that we meet with, seldom fails to carry us through them. Nobody knows the strength of his mind, and the force of regular application, until he has tried. This is certain, he that sets out on weak legs, will not only go farther, but grow stronger too, than one with a vigorous constitution, and firm limbs, who only sits still.

Another cause for laziness is to be found in the fears with which the mind frights itself, when, viewing

difficulties at a distance, it is unwilling to approach nearer to them, and unable to discover that what in the mist appeared hideous giants not to be grappled with; will be found to be of the natural size and shape. Things however, that at a distance seem obscure, must be approached by regular steps; and what is most visible, first considered. Reduce them into their distinct parts; and then bring all that may be known concerning those parts into plain and simple questions; when that, which was thought obscure, will lay itself open to the understanding, and let the mind into that which was viewed with mysterious awe, and kept at a distance. In this, as in all other cases, the surest way for a learner is, not to advance by jumps, but let that which he sets himself to learn next, be as nearly conjoined with what he knows already as is possible: let it be new, and what he did not know before, that the understanding may advance; but let it be as little as it may be, that its advances may be sure. And though this may seem a very lingering way to knowlege, yet whoever shall try it in himself, or any one he will teach, shall find greater advances in this method, than they would in the same space of time make in any other way. True knowlege lies in a distinct perception of things in themselves distinct. Hence they who so state a question as only to disentangle the parts of it one from another, and lay them, when so disentangled, in their due order, show the mind where the truth lies, better than by talking of it for hours together in the gross: for things taken up together, and so lying in confusion, can produce in the mind but a confused knowlege; or at least, when it comes to be examined, will prove little better than none.

ANALOGY.—Analogy is of great use to the mind in many cases, especially in natural philosophy, and that part of it chiefly which relates to experiments. But here we must take care that we keep ourselves within that wherein the analogy consists. For exam-

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ple, the acid oil of vitriol is found to be good in such a case ; therefore the spirit of nitre or vinegar may be used in the like case. If the good effect of it be owing wholly to the acidity of it, the trial may be justified ; but if there be something else besides the acidity in the oil of vitriol, which produces the good we desire in the case, we mistake that for analogy, which is not, and suffer our understanding to be misguided by a wrong supposition of analogy where there is none.

As, by this one easy and unheeded miscarriage of the understanding, loose foundations become infallible principles, and will not suffer themselves to be touched or even questioned, because they seem to carry with them as natural an evidence as self-evident truths themselves, the necessity appears so much the greater for the application of remedies to cure so frequent a cause of mistake. And yet how shall one attempt the cure with any hopes of success ? Many men firmly embrace falsehood for truth, not only because they never have thought otherwise, but because, thus blinded, they never could think otherwise ; at least without a vigor of mind able to contest the empire of habit, and look into its own principles : a freedom which few men have the notion of in themselves, and fewer are allowed the practice of by others ; it being the great art of the teachers in most sects to suppress, as much as they can, this duty which every man owes himself, and which is the first step towards truth in the whole train of his opinions ; such teachers being, it would seem, conscious of the weakness of the tenets they profess, since they will not suffer the grounds whereon they are built to be examined ; while those who seek truth only, and desire to propagate nothing else, freely expose their principles to the test, and, pleased to have them examined, give men leave to reject them if they can ; and if there be any thing unsound in them, are willing to have it detected, that they themselves, as well as others, may not lay any stress on a proposition beyond what the evidence of its truth will warrant.

There is, I know, a great fault among all people, of making their children and scholars imbibe their teachers' notions and tenets, and adhere to them, whether true or false. And yet the only right way of principling tender years is to take heed that no ideas, except such as have some natural cohesion, be united in their heads; and, to inculcate this rule, that they never suffer any ideas to be joined in their understandings, in any stronger combination than what their own nature gives them; and that they often examine whether any association of ideas exist from the visible agreement in the ideas themselves, or only from the custom of the mind in joining them thus together.

This is for caution against this evil, before it be thoroughly riveted by custom; but he that would cure it when habit has established it, must nicely observe the almost imperceptible motions of the mind in its habitual actions, and how readily the ideas of sense change into those of judgment. Hence the frequent instances one meets with of this conduct in the arguings of the learned, who frequently in two ideas, they have been accustomed to join in their minds, substitute one for the other, and often without perceiving it themselves. This, whilst they are under the deceit of it, makes them incapable of conviction, and they applaud themselves as zealous champions of truth, when indeed they are contending for error. In like manner, the confusion of two different ideas, which a customary connexion of them in their minds hath made to them almost one, fills their heads with false views, and their reasonings with false consequences.

FALLACIES.—Right understanding consists in the discovery and adherence to truth, and that in the perception of the visible or probable agreement or disagreement of ideas, as they are affirmed and denied one of another. Whence it is evident, that the right use and conduct of the understanding, whose business is truth, and nothing else, is, that the mind should be

kept in a perfect indifferency, not inclining to either side. But yet it is very hard to meet with any discourse, wherein one may not perceive the author not only maintain (for that is reasonable and fit), but inclined and biassed to one side of the question, with marks of a desire that it should be true.

If it be asked, how authors who have such a bias, may be discovered; I answer, by observing how in their arguments they are led to change the ideas of the question, either by changing the terms, or by adding others to them, more serviceable to their purpose. This is plain and direct sophistry; but is not always made use of with a design to mislead the reader. For men's prejudices impose often on themselves; and their affection for truth, under their prepossession in favor of one side, is the very thing that leads them from it. Inclination thus slides into their discourse favorable terms, which introduce favorable ideas, until at last that is concluded to be evident, when thus dressed up, which, taken in its native state, would find no admittance. The putting those glosses on what they affirm, these easy and graceful explications of what they are discoursing on, is so much the character of what is esteemed good writing, that it is hard to think authors will ever be persuaded to leave what serves so well to propagate their opinions, and to adopt a more jejune and dry way of writing, by keeping to the same terms precisely annexed to the same ideas; a stiffness tolerable in mathematicians only, who make truth prevail by irresistible demonstration.

But yet if authors cannot be prevailed on to quit the looser, though more insinuating ways of writing, if they will not think fit to keep close to truth by unvaried terms and unsophisticated arguments, yet it concerns their readers not to be imposed on by fallacies, and the prevailing ways of insinuation. To do this, the most effectual remedy is to fix in the mind

distinct ideas of the question stripped of words; and in the train of argumentation to take up the author's ideas, and, neglecting his words, to observe how they connect or separate those in the question. He that does this will be able to cast off all that is superfluous; he will see what is pertinent to, and what slides by the question. This will readily show him all the ideas foreign to the discourse; which, though they perhaps dazzled the writer, will be found to give no strength to his reasonings.

This, though it be the easiest way of reading books with profit, and keeping oneself from being misled by plausible discourses; yet as it is hard to those who have not accustomed themselves to it, it is not to be expected that every one will guard his understanding from being imposed on by the wilful, or undesigned sophistry, which creeps into most books of argument. They who write against their conviction, or to maintain the tenets of a party, cannot be supposed to reject any arms that may help to defend their cause, and therefore such should be read with the greatest caution; and they who write for opinions they are sincerely persuaded of, think they may so far indulge their affection to truth, as to set it off in the best colors they can, with a view to gain the easiest entrance into the minds of their readers, and to fix it deepest there.

But as, in the exercise of that caution which becomes the sincere pursuit of truth, some may not have the skill of representing to themselves the author's sense by pure ideas, divested of the deceitful ornaments of speech; yet they should, as they can do, keep the question steadily in their minds, nor suffer the least alteration in the terms, either by addition, subtraction, or substituting any other; otherwise they will make their understandings only the warehouse of other men's lumber, rather than a repository of truth for their own use.

FUNDAMENTAL VERITIES.—The mind of **man** being very narrow, and slow in taking in new truths, no one man is capable to know all truths. It becomes therefore our prudence, in the search after knowlege, to employ our thoughts about fundamental questions, and not to suffer ourselves to be diverted from our main purpose, by those that are merely incidental. How much time is thrown away in purely logical inquiries! This is no better than if a man, who was to be a painter, should spend all his time in examining the threads of the several cloths he is to paint on, and counting the hairs of each pencil he intends to use. Nay, it is much worse; for the young painter has merely lost his time, while they who are designed for scholars lose not only their time in such disputes on logical questions, but imbibe notions unfitted for the acquisition of real knowlege, by thinking their understandings so well furnished that they need look no farther into the nature of things, or descend to the drudgery of inquiry; and thus remain for ever contented with observations that contain nothing of moment in themselves, nor serve as clues to lead them into farther knowlege.

Fundamental truths, on which a great many others rest, are teeming truths, and rich in store; and, like the lights of heaven, are not only beautiful in themselves, but give light to other things, that without them could not be known. Such is that admirable discovery of Newton, that all bodies gravitate to one another, which may be counted as the basis of natural philosophy; and from which other things not yet known will, if the inquiry be rightly pursued, be discovered. Our Saviour's great rule, that 'we should love our neighbor as ourselves,' is such a fundamental truth for the regulating human society, that one might, without difficulty, determine all cases in social morality by that rule alone.

BOTTOMING.—Most of the difficulties that come

in our way, when well considered, lead us to some proposition, which, known to be true, gives an easy solution of the question; whilst topical or superficial arguments, of which there is store to be found on both sides, filling the head with variety of thoughts, and the mouth with copious discourse, serve only to amuse without coming to the bottom of the question, the only place of rest for an inquisitive mind, whose tendency is to truth.

For example, if it be demanded, whether the Grand Seignior can lawfully take what he will from any of his people? This question cannot be resolved without coming to a certainty, whether all men are naturally equal; for on that it turns; and that truth, well settled in the understanding, will go a great way in showing on which side the truth is.

TRANSFERRING OF THOUGHTS.—There is scarcely any thing more conducive to the improvement of knowledge, and the despatch of business, than for a man to be able to dispose of his own thoughts; and there is scarcely any thing harder in the whole conduct of the understanding than to get a full mastery over it. The mind, in a waking man, has always some object that it applies to. When we are lazy or unconcerned, we can at pleasure transfer our thoughts from one object to another, and from thence to a third, which has no relation to either of the former. Hence men forwardly conclude, that nothing is so free as thought, and it were well it were so; but the contrary will be found true in several instances; wherein our thoughts; restive and ungovernable, will not be directed what objects to pursue, nor be taken off from those they have once fixed on, but run away with a man in pursuit of those ideas they have in view, let him do what he can.

Thus matters that are recommended to our thoughts by our passions, take possession of our minds with a kind of authority, and will not be kept out or dis-

lodged,—but, as if the passion that rules were, for the time, the sheriff of the place, and came with all the *posse*, the understanding is seized and taken with the object it introduces, as if it had a legal right to be alone considered there. There is scarce any body of so calm a temper, who hath not some time found this tyranny on his understanding, and suffered under the inconvenience of it. Who is there, whose mind, at some time or other, has not through love or anger, fear or grief, been so fastened to some clog, that it could not turn itself to any other object? Men thus possessed, are as if they lay under the power of an enchantment. They see not what passes before our eyes, hear not the audible discourse of the company; and when, by any strong application they are roused a little, they are like men brought from some remote region; whereas, in truth, they come no farther than their secret cabinet within, where they have been wholly taken up with their own mental puppet-show. This fact alone is a sufficient argument, that we have not that power over the understanding, so as to make use of it on occasions when we have need of its assistance. Did this state of mind remain always so, every one would give it the name of perfect madness; and while it does last, such a rotation of thoughts about the same subject no more carries us forwards towards the attainment of knowledge, than getting on a mill-horse, whilst he jogs on his circular track, would carry a man on a journey.

I grant something must be allowed to legitimate passions, and to natural inclinations. Every man, besides occasional affections, has beloved studies, and those the mind will more closely stick to; but yet it is best that it should be always under the disposal of the man, to act how, and on what he directs.

But before successful remedies can be thought on for this disease, we must know the several causes of it.

One we have already instanced in the existence of

a prevailing passion ; which so pins down our thoughts to one object, that a man, for example, passionately in love, cannot bring himself to think of his ordinary affairs ; nor a mother drooping under the loss of a child, bring herself to act the part she was wont to do in the company of her friends.

Besides this, we often find that the understanding, when it has awhile employed itself on a subject, which some slight accident offered to it without the interest or recommendation of any passion, works itself into a warmth, and, by degrees, gets into a career, wherein, like a bowl down a hill, it increases its motion by going, and will not be stopped or diverted ; though, when the heat is over, it sees all this earnest application was about a trifle not worth a thought, and all the pains employed about it, lost labor.

There is a third sort, yet lower than this ; a kind of childishness of the understanding ; wherein, during the fit, it plays with some insignificant puppet to no end ; and yet cannot easily be got off from it. Thus some trivial sentence or a scrap of poetry will sometimes get into men's heads, and make such a chiming there, that there is no stilling of it, and, like an impertinent guest, will possess the thoughts in spite of all endeavors to get rid of it. Whether every one hath experienced this troublesome intrusion of some frisking ideas, which thus importune the understanding, and hinder it from being better employed, I know not : but more than one person of very good parts, I have heard complain of it. The reason I have to make this doubt, is from what I have known in a case something of kin to this, though much odder, and that is a sort of vision, which some people have while lying quiet but perfectly awake in the dark, or with their eyes shut ; when a great variety of faces, most commonly very old ones, appear to them in a train one after another ; so that having had just the sight of one, it immediately passes away to give place to another,

which the same instant succeeds, and has as quick an exit as its leader; and so they march on in a constant succession; nor can any one of them by any endeavor be stopped or retained beyond the instant of its appearance, but is thrust out by its follower, which will have its turn. Concerning this fantastical phenomenon, (which seems to depend on the matter and motion of the blood or animal spirits,) I have talked with several people, whereof some have been perfectly acquainted with it, and others have been so wholly strangers to it, that they could hardly be brought to conceive, much less believe it.

When the fancy is thus bound by passion, the only way to set the mind at liberty to prosecute what thoughts the man would make choice of, is to allay the present passion, or counterbalance it with another, which is an art to be got only by study, and acquaintance with the passions.

They who find themselves apt to be carried away with the current of their thoughts, not excited by passion or interest, must be very careful to stop it, and never humor their minds in being thus triflingly busy. Men know the value of their corporal liberty, and therefore do not willingly suffer chains to be put on them: but to have the mind captivated, is certainly the greater evil of the two; and it deserves our utmost care to preserve the freedom of our better part. Since, then, we must never indulge in those trivial attentions of thought; as soon as we find the mind makes itself a business of nothing, we should immediately disturb it, by new and more serious considerations, nor leave until we have beaten it off from the pursuit it was on. This, at first, will perhaps be difficult; but constant endeavors will by degrees prevail, and at the last make it easy. When a man can thus draw off his mind at pleasure from incidental pursuits, it may not be amiss for him to go on farther, and make attempts on meditations of greater moment, that at the last he

may have full power over his mind, and be so master of his thoughts, as to be able to transfer them from one subject to another, with the same ease that he can lay by any thing he has in his hand, and take something else that he has a mind to in the room of it. The same rousing of the mind, and setting the understanding on work with vigor, will presently set it free from those idle thoughts, of which I have spoken above, as making in the head, as it were, a noise, at a time when the mind is either lazy or but loosely employed.

THE END.





